Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.





WATER SUPPLY OUTLOOK FOR OREGON

U. S. DEPT. OF AGRICULTURE NATIONAL AGRICULTURAL LIBRARY

OCT 6 1969

FEDERAL - STATE - PRIVATE COOPERATIVE SNOWERSURS CORDS

UNITED STATES DEPARTMENT of AGRICULTURE ... SOIL CONSERVATION SERVICE

and

OREGON STATE UNIVERSITY

and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above in cooperation with other Federal, State and private organizations.

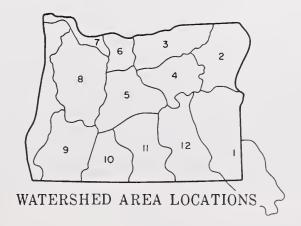
MAY 1, 1969

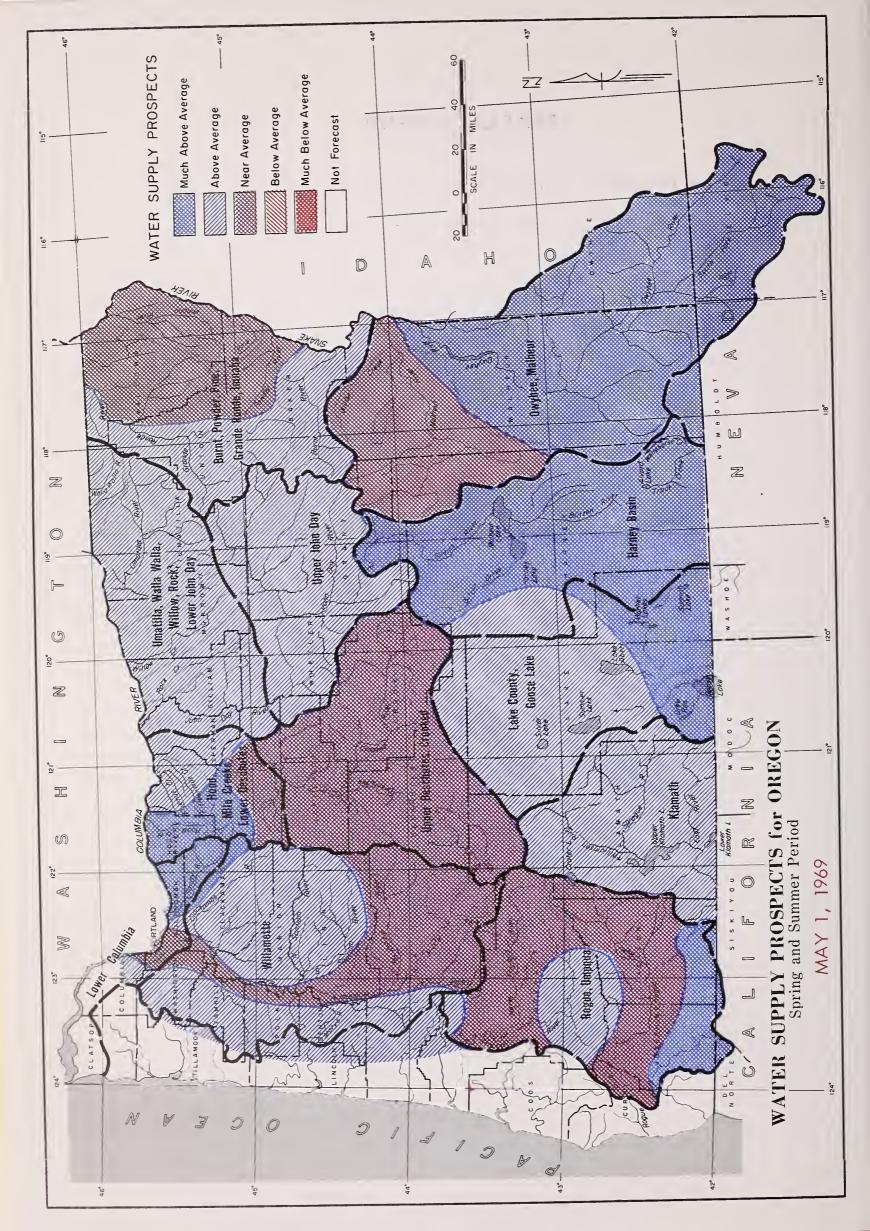


TABLE OF CONTENTS

	' /	, GL
WATER SUPPLY PROSPECTS FOR OREGON	g Page	1
WATER SUPPLY OUTLOOK FOR OREGON		. 1
AUTOMATIC SNOW STATIONS	5 AND	6
STORAGE STATUS OF OREGON RESERVOIRS(MAP)		. 7
MOUNTAIN SOIL MOISTURE IN OREGON(MAP)		8
VALLEY PRECIPITATION IN OREGON(MAP AND TABLE)		9
CURRENT OREGON STREAMFLOW(GRAPH)		10
DETAILED WATER SUPPLY OUTLOOK BY MAJOR WATERSHED AREAS		
OWYHEE, MALHEUR	AREA	1
BURNT. POWDER. PINE. GRANDE RONDE. IMNAHA	AREA	2
UMATILLA. WALLA WALLA. WILLOW, ROCK, LOWER JOHN DAY	AREA	3
UPPER JOHN DAY	AREA	4
Upper Deschutes, Crooked	AREA	5
HOOD. MILE CREEKS. LOWER DESCHUTES	AREA	6
LOWER COLUMBIA	AREA	7
WILLAMETTE	AREA	8
ROGUE, UMPQUA	AREA	9
KLAMATH	AREA	10
LAKE COUNTY, GOOSE LAKE	AREA	11
HARNEY BASIN	AREA	12'
MAP AND INDEX OF OREGON SNOW COURSES(MAP)		

LIST OF COOPERATORS......Inside Back Cover





May 1, 1969

The 1969 water supply outlook for Oregon ranges from near average to much above average. Warm temperatures during the first half of April caused a rapid melt of the snowpack and streams responded with high volume flows. Stored water in most reservoirs throughout the State is now above average.

SNOW COVER

The snowpack is nearly gone in eastern Oregon because of the warm temperatures early in April, and remains only at the highest elevations. An exception is on the upper Grande Ronde and in the Wallowa Mountains where near average snow cover exists. Snow cover is still above average in the Cascades and varies from 110 percent in the central part up to 135 percent of average in the north, around Mt. Hood.

PRECIPITATION

April precipitation, as reported by the U. S. Weather Bureau, was below normal in Central Oregon and in Malheur County. Near average amounts were received in the Willamette and Rogue-Umpqua Basins and in Harney County. The northeastern part of the State recorded rainfall 120 to 145 percent of normal.

RESERVOIR STORAGE

Excessive April streamflow provided excellent inflow to reservoirs and, as a result, stored water supplies are currently 111 percent of average. Twenty-five reservoirs contained 2,792,500 acre feet of water on May 1. This is 88 percent of total usable capacity.

STREAMFLOW

April streamflow, as reported by the U. S. Geological Survey, was excellent in most areas of Oregon and varied from near average in the Rogue-Umpqua watersheds up to 433 percent of average on the Owyhee.

Selected volume streamflow forecasts in acre feet are as follows:

Stream	Period	Forecast %	1953-67 Avg.
Owyhee net Inflow	May-Sept.	200,000 a.f.	112
Grande Ronde at La Grande	May-Sept.	108,000 a.f.	103
Umatilla at Pendleton	May-Sept.	88,000 a.f.	110
Deschutes at Benham Falls	May-Sept.	425,000 a.f.	83
Hood near Hood River	May-Sept.	319,000 a.f.	131
Mid. Fk. Willamette blw N. Fk.	AprSept.	898,000 a.f.	108
Rogue at Raygold	May-Sept.	719,000 a.f.	105
Upper Klamath Lk. net Inflow	May-Sept.	420,000 a.f.	109



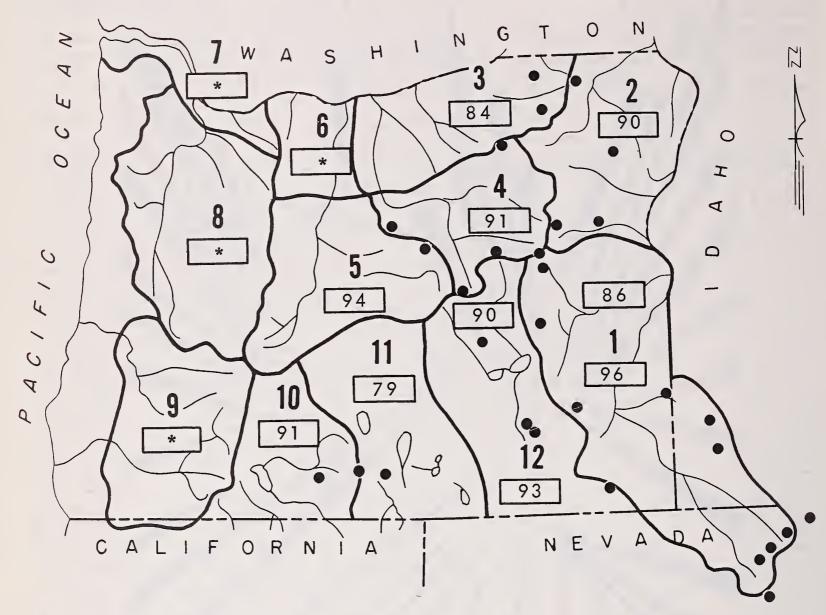
STORAGE STATUS of OREGON RESERVOIRS usable contents in thousands of acre feet

May 1, 1969 128.7 228.4 33.5 Cougar Green Peter 4.1 Wasco 39.6 49.7 Wallowa Lake 155.2a 270.0a Cold Springs 37.5 Phillips Lake 11.9 50.0 73.5 242.2 51.1 25.0 17.4 Foster Detroit Timothy Lake 31.6 299.9a 25.2 Thief Valley 61.7 30.0a Crane Prairie Unity 17.4 25.2 55.3 32.5 13.2 54.4 Agency Valley Crescent Lake Fall Creek 168.2 70.8 McKay 86.9a 115.0a Wickiup 60.0 73.8 200.0 227.4 Lookout Point N.R. Willow Creek No. 3 337.2a 26.0 79.6 Fern Ridge 30.0 Bully Creek 94.2a 30.0 53.9 152.0 Dorena Warm Springs 70.5a 191.0 22.7 701.0 Lake Owyhee Cottage Grove 30.0a 715.0 141.0 56.0 Hills Creek Antelope 200.0a 55.0 4.1 33.8 Fish Lake Ochoco 7.8 47.5 38.6 153.6 Emigrant Gap Prineville 39.0 153.0 13.6 5.4 41.4 90.4 Howard Prairie Hyatt Prairie Four Mile Lake Gerber 60.0 Thompson Valley 16.1 94.0 16.1 17.4 555.7 329.6 63.5 8.1 Clear Lake Upper Klamath L. 584.0 440.2 Drew Cottonwood 63.0 8.7 **EXPLANATION** 687.0 --- Contents 715.0 --- Capacity

⁽a) Multiple purpose reservoir - space reserved for flood runoff. $N.\ R.$ - No report.

MOUNTAIN SOIL MOISTURE in OREGON as percent of capacity

May 1, 1969

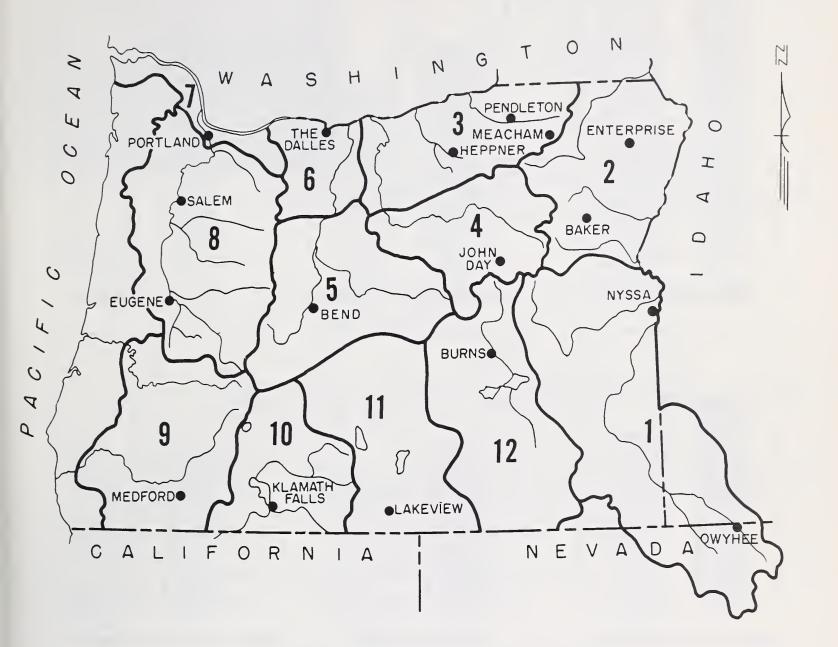


Soil Moisture Station

*Moisture studies not yet developed in these areas.

VALLEY PRECIPITATION in OREGON a

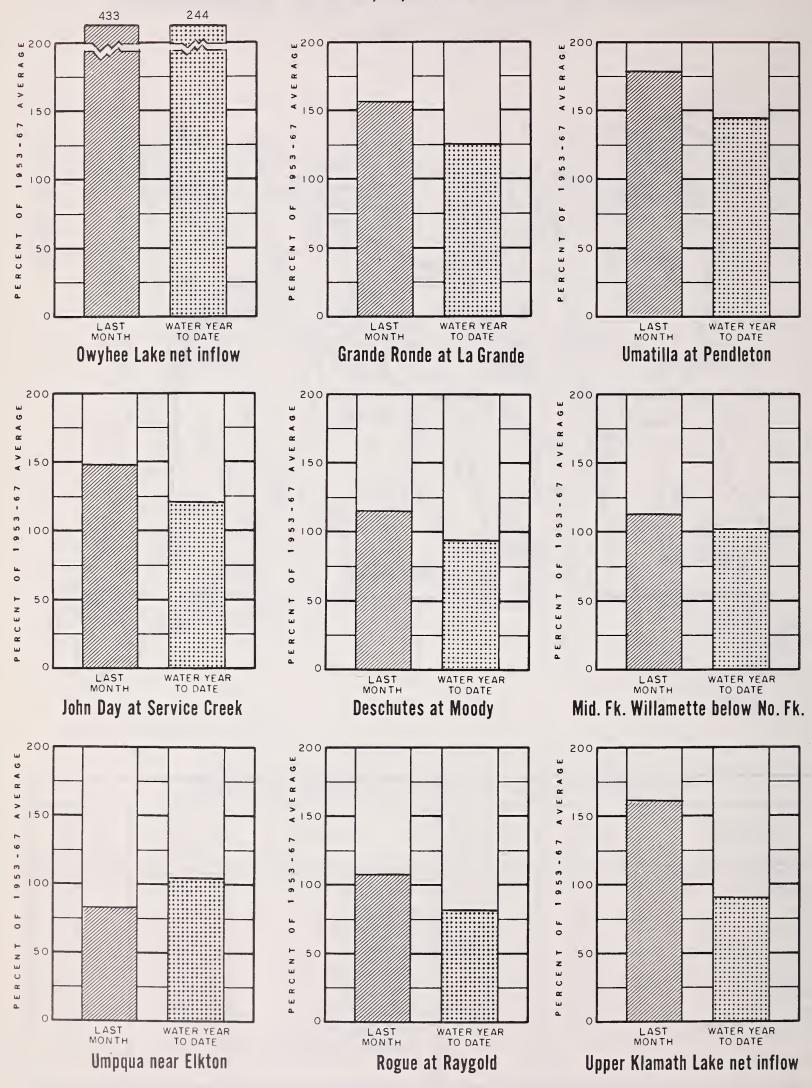
May 1, 1969



PRECIPITATION as PERCENT of the 1953-67 AVERAGE					
STATION	LAST MONTH	WATER ⁶ YEAR TO DATE	STATION	LAST MONTH	WATER b YEAR TO DATE
Baker Apt. Bend Burns Enterprise Eugene Apt. Heppner John Day Klamath Falls Apt.	170 46 58 105 116 136 149 115	129 73 112 95 126 127 146 91	Lakeview Meacham Medford Apt. Nyssa Pendleton Apt. Portland Apt Salem Apt. The The Dalles Owyhee (Nevada)	74 122 54 131 192 100 100 63 46	115 95 83 129 127 120 115 108 124

CURRENT OREGON STREAMFLOW

May 1, 1969





WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS OREGON

*as of*MAY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Excellent water supplies will be available for most Malheur County water users during the summer of 1969. An exception is the Vale-Oregon Irrigation District which will have near average supplies.

SNOW COVER

Warm temperatures during the first two weeks of April melted most of the snow-pack. Snow remains on the Upper Jordan Creek watershed and in the higher elevations of the Malheur River.

PRECIPITATION

According to the U.S. Weather Bureau, April brought less than normal amounts of rainfall to the county. It was 82 percent of average.

SOIL MOISTURE

Soil moisture remains excellent and will benefit runoff from spring rainfall.

RESERVOIR STORAGE

All of Malheur County's principal reservoirs are storing above average amounts of water for May 1. Lake Owyhee contained 701,000 acre feet compared to its usable capacity of 715,000 a.f. Warmsprings, Agency Valley and Bully Creek Reservoirs held 236,400 a.f. compared to an average 208,000 acre feet.

STREAMFLOW

Streamflow during April from the rapid melt of the snowpack was two to four times normal.

Selected forecasts of May-September volume flows are as follows:

<u>Stream</u>	Volume	Percent of 1953-67 Avg.
Owyhee Reservoir net Inflow	200,000 a.f.	112
Malheur, No. Fk. at Beulah	30,000 a.f.	79
Malheur near Drewsey	25,000 a.f.	74
*Jordan Cr. above Lone Tree Cr.	55,000 a.f.	114

^{*}May-July

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

RESERVOIR	STORAGE	(1,000	Ac.	Ft.)	May 1	, 1969

STREAM or AREA	FLOW PERIOD		
STREAM OF AREA	SPRING SEASON LATE SEASO		
Boulder Creek Bully Creek Cow Creek Jordan Creek Jordan Valley Irrig. Dist. McDermitt Creek Oregon Canyon Creek Owyhee Project Succor Creek Tenmile Creek Vale-Oregon Irrig. Dist. Warmsprings Irrig. Dist. Willow Creek (Reservoired)	Excellent Average Average	Average Average Average Excellent Average Excellent Average Excellent Average Average Average Average Average Average Average Average	

	(. , , , ,		riay I,	1505
RESERVOIR	USABLE	MEASURED (First of Month		
RESERVOIR	CAPACITY	THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Agency Valley Antelope Bully Creek Owyhee Warmsprings Willow Creek #3 *May 6, 1969.	60.0 55.0 30.0 715.0 191.0 26.0	54.4 56.0* 30.0 701.0 152.0 b	42.8 23.1 23.1 432.2 106.7	50.1 30.7 20.6 531.9 137.2

STREAMFLOW FORECASTS a (1,000 Ac. Ft.) as of May 1, 1969

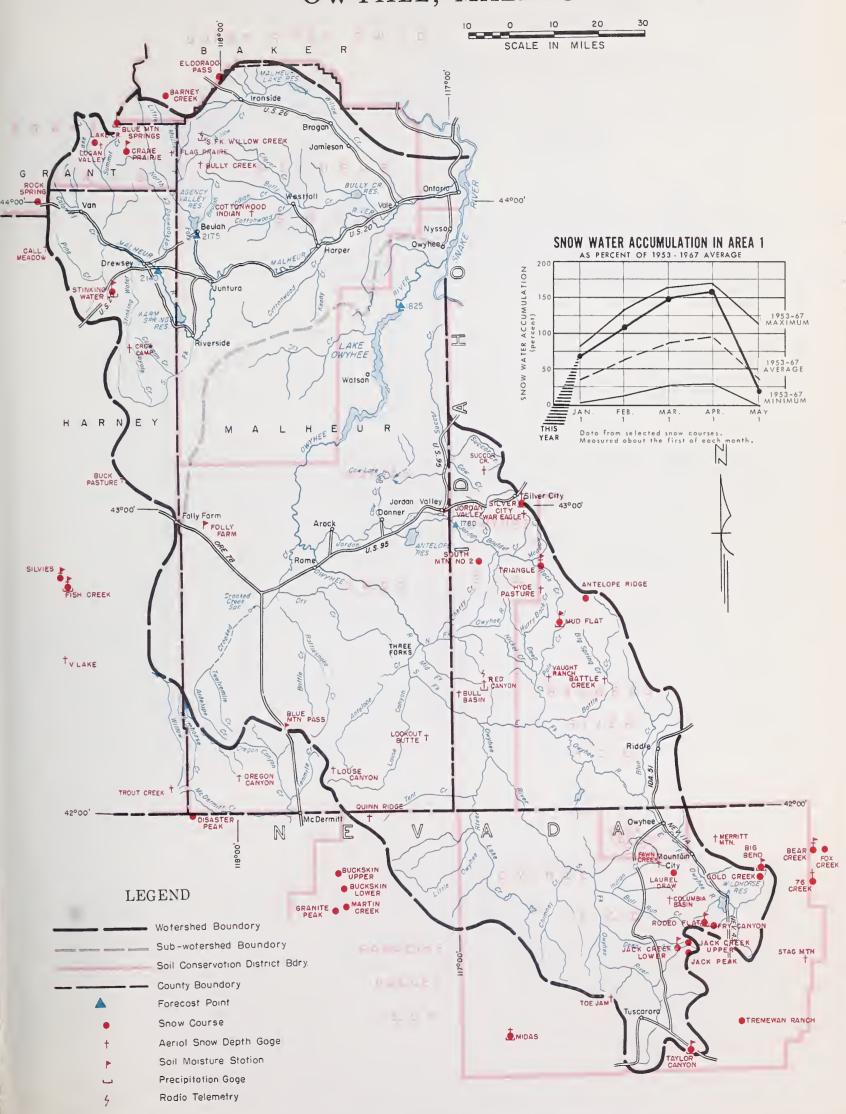
NO.	FORECAST POINT	FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
1780	Jordan Creek above Lone Tree Creek	55	May-July	48	114
2140	Malheur near Drewsey	24	May-July	33	73
		25	May-Sept.	34	74
2175	Malheur, North Fork at Beulah d'	25	May-July	33	76
		30	May-Sept.	38	79
1825	Owyhee Reservoir net Inflow k	175	May-July	160	109
		200	May-Sept.	179	112

OIL MOISTURE		PROFILE	(Inches)	SOIL MOISTURE (Inches)			
STATION		DEPTH	CAPACITY	DATE	THIS	THIS LAST 2	
NAME	ELEVATION	DETTI	DALACITI		YEAR	YEAR	AGO
Bear Creek (Nev.)	7800	72	16.8	С			
Big Bend (Nev.)	6700	48	16.7	4/24	16.5	16.4	15.9
Blue Mountain Springs	5900	42	16.9	4/28	12.5	12.9	12.1
Crane Prairie	5375	48	18.2	4/28	18.0	18.1	16.4
Folly Farm	4450	30	12.5	с			
Jack Cr., Lower (Nev.)	6800	48	8.6	4/24	8.3	8.3	8.3
Jordan Valley	4390	36	14.8	4/30	16.9	10.3	
Mud Flat (Ida.)	5500	48	12.8	С			
Rodeo Flat (Nev.)	6800	42	11.0	4/24	11.0	10.9	9.2
Stinking Water Summit	4800	48	21.9	4/28	21.9		
Taylor Canyon (Nev.)	6200	48	15.1	4/29	15.0	14.6	13.2
Triangle (Ida.)	5150	48	16.6	С			

SNOW		CUR	RENT INFORMA	PAST RECORD		
SNOW COURSE		DATE OF	SNOW DEPTH	WATER	WATER CON	TENT (Inches)
NAME	ELEVATION	SURVEY	(Inches)	CONTENT (Inches)	LAST YEAR	1953-1967 AVERAGE
Antelope Ridge (Ida.)	5900	С				
Barney Creek	5950	4/29	6	2.6	0.0	
Battle Creek (Ida.)	5700	С				
Bear Creek (Nev.)	7800	4/28	46	20.3	15.2	19.4
Big Bend (Nev.)	6700	4/24	0	0.0	0.0	0.9
Blue Mountain Springs	5900	4/28	11	5.0	0.0	8.4
Buck Pasture	5700	С				
Buckskin, Lower (Nev.)	6700	с				
Buckskin, Upper (Nev.)	7200	С				
Bull Basin (Ida.)	5600	С				

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.

OWYHEE, MALHEUR WATERSHEDS



0W		CURRENT INFORMATION PAST RECORD			ECORD	
SNOW COURSE		DATE OF	SNOW DEPTH	WATER CONTENT	WATER CONT	
NAME	ELEVATION	SURVEY	(Inches)	(Inches)	LAST YEAR	1953-1967 AVERAGE
ully Creek	5300	с				
all Meadow	5340	c				
Columbia Basin (Nev.)	6650-	c				
ottonwood-Indian	4320	c				
rane Prairie	5375	c				
row Camp	5500	c				
isaster Peak (Nev.)	6500	с				
ldorado Pass	4600	4/25	0	0.0	0.0	0.0
awn Creek (Nev.)	7000	c			0.0	
ish Creek	7900	С				
lag Prairie	4750	c				
ox Creek (Nev.)	6800	c	1			
ry Canyon (Nev.)	6700	4/24	0	0.0	0.0	1.0
old Creek (Nev.)	6600	4/24	o o	0.0	0.0	0.0
ranite Peak (Nev.)	7800	c	Ĭ	0.0	0.0	
yde Pasture (Ida.)	5800	С				
ack Creek, Lower (Nev.)	6800	4/24	0	0.0	0.0	0.2
ack Creek, Upper (Nev.)	7250	4/24	0	0.0	0.0	3.5
ack Peak (Nev.)	8420	4/24	, o	0.0	21.7	26.6
ake Creek	5120	c c		0.0	21.7	20.0
aurel Draw (Nev.)	6700	С				
	5100	С	1			
ogan Valley	5650	с				
ookout Butte	6440	с				
ouse Canyon	6700	С				
artin Creek (Nev.)		c				
erritt Mountain (Nev.)	7000	c				
idas (Nev.)	7200	c				
ud Flat (Ida.)	5500	c				
regon Canyon	6950	c				
uinn Ridge (Nev.)	6300	c				
ed Canyon (Ida.)	6500					
ock Spring	5100	5/1	0	0.0	0.0	0.4
odeo Flat (Nev.)	6800	4/24	0	0.0	0.0	1.2
6 Creek (Nev.)	7100	С			_	
ilver City (Ida.)	6400	4/28	24	11.2	T	6.7
ilvies	6900	c				
outh Mountain #2 (Nev.)	6340	4/30	11	5.8	0.0	
tag Mountain (Nev.)	7800	С				
tinking Water	4800	c				
uccor Creek (Ida.)	6100	С				
aylor Canyon (Nev.)	6200	4/29	0	0.0	0.0	0.1
oe Jam (Nev.)	7700	С				
remewan Ranch (Nev.)	5700	4/24	0	0.0	0.0	0.0
riangle (Ida.)	5150	с				
rout Creek	7800	c				
V" Lake	6600	c				
aught Ranch (Ida.)	5950	c				
ar Eagle (Ida.)	7700	c				



WATER SUPPLY OUTLOOK BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS OREGON

as of

U. S. D. A. SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK '

Average water supplies are in prospect for water users in northeastern Oregon this coming summer. Conditions remain about the same as last month due to good rains and cool temperature during the last half of April.

SNOW COVER

Some melting has occurred at lower elevations but the snowpack remains near normal for this time of year over most of the area. Exceptions are on the Burnt and the upper main stem of the Powder where rapid melt occurred during the first week of April.

PRECIPITATION

April brought generous amounts of rain to most of the area. The U.S. Weather Bureau reported 122 percent of average precipitation over the Burnt, Grande Ronde and Powder River watersheds.

RESERVO!R STORAGE

Principal reservoirs in the area are now nearly full from the excellent stream-flow which occurred during April. The exception is Phillips Lake which contains 39,600 acre feet compared to its usable capacity of 73,500 acre feet. Unity and Thief Valley Reservoirs are both filled--containing 25,200 acre feet and 17,400 acre feet respectively. Wallowa Lake held 33,500 a.f. on May 1. Its usable capacity is 37,500 acre feet.

STREAMFLOW

Prospective streamflow is as follows:

Grande Ronde at La Grande May-Sept 108,000 a.f., 103 Burnt near Hereford May-Sept 12,000 a.f. 77 Imnaha near Imnaha AprSept 300,000 a.f. 98	Forecast Percent 1953-67 Average	Forecast	Period	Stream
Imnaha near Imnaha AprSept 300,000 a.f. 98				
Powder at Baker May-Sept 32,000 a.f. 73 Eagle Cr. abv. Skull Cr. May-Sept 160,000 a.f. 102	00,000 a.f. 98 32,000 a.f. 73	300,000 a.f. 32,000 a.f.	AprSept May-Sept	Imnaha near Imnaha Powder at Baker

Report prepared by —

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1969

STREAM or AREA	FLOW I	PERIOD	RESERVOIR	USABLE	MEASUR	ED (First o	f Month
SPRING SEAS		LATE SEASON	RESERVOIR	CAPACITY	THIS YEAR	LAST YEAR	1953-19 AVERAG
Alder Slope	Average	Average	Thief Valley	17.4	17.4		
Baker Valley	Average	Average	Unity	25.2	25.2	25.6	24.
Big Creek	Average	Average	Wallowa Lake	37.5	33.5	30.3	25
Clover Cr. (nr. N. Powder)	Average	Average	Phillips Lake	73.5	39.6		20
Cove	Average	Average					
urkee	Average	Average					
Eagle Valley	Average	Average					
lgin	Average	Average		i			
Interprise-Joseph	Average	Average					
Hereford-Bridgeport	Average	Average					
mnaha River	Average	Average					
aGrande-Island City	Average	Average					
ostine-Wallowa	Average	Average					
o. Powder River-Wolf Creek	Average	Average					
ine Valley	Average	Average					
owder River-Elk Creek	Average	Average					
ummerville	Average	Average					
Sumpter Valley	Average	Average					
Inion-Hot Lake	Average	Average					
Jnity	Average	Average					

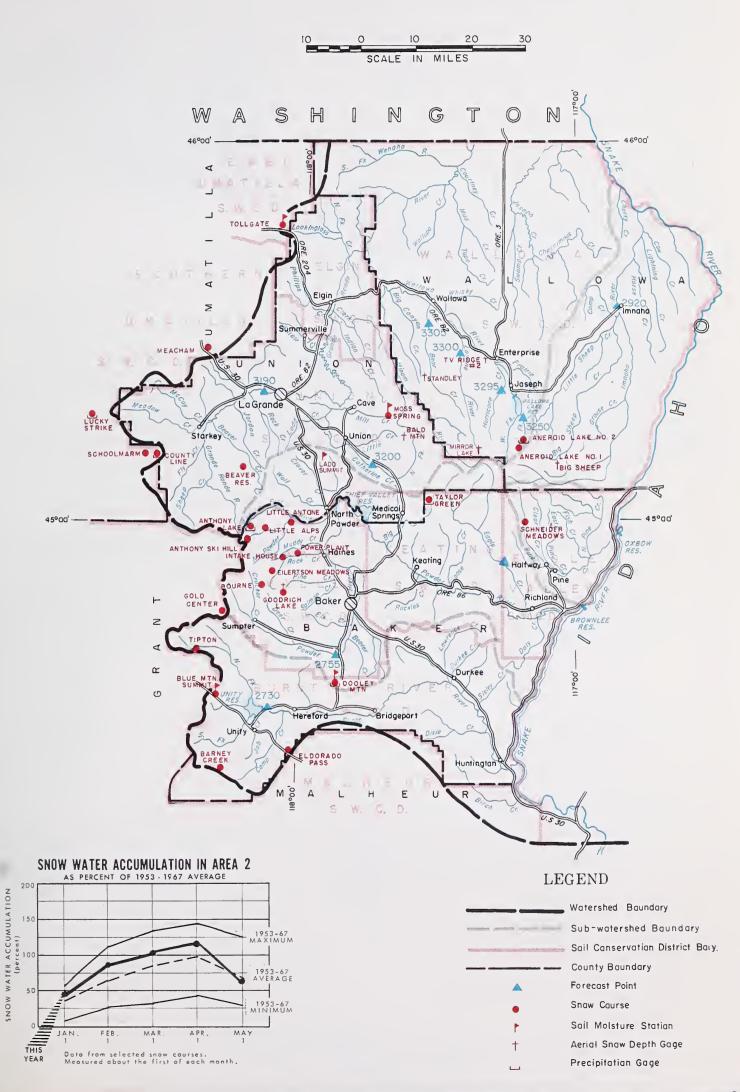
STREAMFLOW FORECASTS a (1,000 Ac. Ft.) as of May 1, 1969

NO.	FORECAST POINT	FORECAST THIS YEAR	FORECAST PERIOD	1953 – 67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
3305	Bear near Wallowa	59	May—Sept.	57	104
2730	Burnt near Hereford d	10.0	May-June	13.6	74
2700	- Darie Real Hererora	12.0	May-Sept.	15.5	77
3200	Catherine near Union	56	May-Sept.	52	108
2882	Eagle Creek above Skull Creek	145	May-July	143	101
		160	May-Sept.	156	102
3190	Grande Ronde at La Grande	104	May-July	101	103
		108	May-Sept.	105	103
3295	Hurricane Creek near Joseph	46	April-Sept.	47	98
2920	Imnaha at Imnaha	300	April-Sept.	307	98
3300	Lostine near Lostine	130	April-Sept.	125	104
2755	Powder River near Baker	30	May-July	42	71
		32	May-Sept.	44	73
3250	Wallowa, East Fork near Joseph d	8.7	May-July	8.7	100
		11.2	May-Sept.	11.2	100

IL MOISTURE		PROFILE	(Inches)		SOIL MOISTU	RE (Inches)	-
STATION		DEPTH	CAPACITY	DATE	THIS	LAST	2 YEARS
NAME	ELEVATION	DEFIN	OAL AGITT	J	YEAR	YEAR	AGO
Blue Mountain Summit Dooley Mountain Emigrant Springs Ladd Summit Moss Springs Follgate	5100 5430 3925 3730 5850 5070	36 36 48 48 42 48	16.8 9.2 22.3 18.9 25.8 23.6	4/24 4/24 4/25 4/24 4/26 4/29	16.2 7.0 21.6 13.5 15.7 18.1	13.0 7.1 20.6 9.9 15.0 18.7	13.2 6.1 20.4 13.3 16.4 18.8

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS



Burnt, Powder, Pine, Grande Ronde, Imnaha Watersheds

NOW		CUR	RENT INFORMA	TION	PAST RECORD		
SNOW COURSE		DATE OF	SNOW DEPTH	WATER CONTENT	WATER CONTENT (Inches		
NAME	ELEVATION	SURVEY	(inches)	(Inches)	LAST YEAR	1953-1967 AVERAGE	
Aneroid Lake #1	7480	4/28	88	39.8	39.4	39.7 7	
Aneroid Lake #2	7300	4/28	76	36.6	33.8	34.7 h	
Anthony Lake	7125	4/28	56	26.6	22.2	30.3	
Bald Mountain e (Ore.)	6700	4/26	29	13.6	15.8	20.1	
Barney Creek	5950	4/29	6	2.6	0.0	20.1	
Beaver Reservoir	5340	4/25	32	13.0	2.7	6.9	
Big Sheep e	6200	4/26	43	20.2	30.2	22.0	
Blue Mountain Summit	5098	4/29	3	1.3	0.0	1.9	
Bourne	5800	4/28	4	1.6	0.0	7.7	
County Line	4800	5/2	o l	0.0	0.0	/ • /	
Dooley Mountain	5430	4/24	4	1.3	0.0	1.9	
Eilertson Meadows	5400	4/25	9	3.3	0.0	4.5	
Eldorado Pass	4600	4/25	0	0.0	0.0	0.0	
Gold Center	5340	4/28	l i	0.5	0.0	4.2	
Goodrich Lake	6775	b	_	0.0	27.3	27.0	
Intake House	4930	4/25	13	5.3	0.0	27.0	
Little Alps	6200	4/28	34	14.9	8.0	13.1	
Little Antone	5000	4/28	0	0.0	0.0		
Lucky Strike	5050	4/30	25	10.5	2.0	8.5	
Meacham	4300	4/25	3	0.5	0.0	2.1	
Mirror Lake ^e	8200	4/26	147	69.1	88.7	74.5	
Moss Springs	5850	4/26	53	21.6	17.4	21.2	
Power Plant	3990	4/25	0 0	0.0	0.0	Z1 • Z	
Schneider Meadows	5400	4/29	45	20.9	24.2	24.3	
Schoolmarm	4775	5/2	0	0.0	0.0	0.6	
Standley e	7400	4/26	77	36.2	30.4	31.6	
Taylor Green	5740	4/26	28	11.4	6.6	31.6	
Tipton	5100	4/30	0 0	0.0	0.0	1.6	
Tollgate	5070	4/29	30	13.8		18.0	
TV Ridge e	7000	4/29	45	21.2	0.0 20.2	18.0	



WATER SUPPLY OUTLOOK UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS OREGON

as of MAY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Excellent water supplies are in prospect for water users this spring and summer in Gilliam, Umatilla and Morrow Counties.

SNOW COVER

Rapid melt of mountain snow occurred early in April due to warm temperatures. Snow remains at only the higher elevation snow courses such as Tollgate and Lucky Strike. However, the snowpack is still 80 percent of normal for this time of year.

PRECIPITATION

Generous amounts of rain were received in the area during April. The U.S. Weather Bureau reported 139 percent of normal rainfall.

RESERVOIR STORAGE

Principal reservoirs are now full or nearly full. Cold Springs contains 49,700 acre feet while McKay Reservoir is holding 70,800 a.f.

STREAMFLOW

Streamflow was excellent during April according to the U.S. Geological Survey. The Umatilla near Pendleton produced 135,700 a.f. during the month. This is 180 percent of average. Selected May-September volume forecasts are as follows:

Stream	Forecast, a.f.	Percent 1953-67 Average
*Butter Creek near Pine City McKay near Pilot Rock Umatilla near Pendleton So. Fk. Walla Walla nr. Milton	4,500 12,000 88,000 57,000	112 109 110 114
No. Fk. Walla Walla nr. Milton	9,700	111

*May-July

Report prepared by =

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST. PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1969

STREAM or AREA	FLOW I	PERIOD
STREAM OF AREA	SPRING SEASON	LATE SEASON
Walla Walla River, No. Fork Walla Walla River, So. Fork Walla Walla River, Main Walla Walla River, Little Couse Creek Dry Creek Pine Creek Umatilla River, Main Wildhorse Creek Umatilla R. (McKay Res.) McKay Creek Birch Creek Butter Creek Willow Creek Rock Creek (John Day tributary)	Average Average Average Average Excellent	Average

MEGERIOIR GIGRINGE			1145	, 1303
RESERVOIR	USABLE	MEASUR	ED (First o	
NEGER VOIR	CAPACITY	THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Cold Springs McKay	50.0 73.8	49.7 70.8	44.6 36.4	49.7 57.7

STREAMFLOW FORECASTS a (1,000 Ac. Ft.) as of May 1, 1969

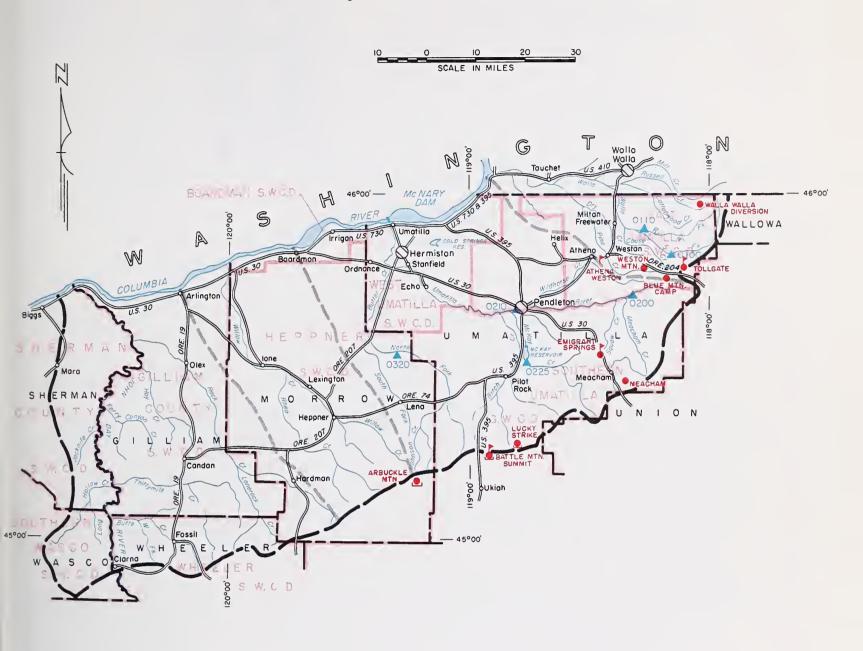
0320 Butter Creek near Pine City 4.5 May-July 4.0 112 0225 McKay near Pilot Rock 12.0 May-Sept. 11.0 109 0200 Umatilla River near Gibbon 50 May-July 42 119 0210 Umatilla River at Pendleton 83 May-Sept. 48 114 0110 Walla Walla, No. Fork near Milton 9.2 May-July 8.2 112 0100 Walla Walla, So. Fork near Milton 9.7 May-Sept. 8.7 111 0100 Walla Walla, So. Fork near Milton 43 May-July 38 114 0100 Walla Walla, So. Fork near Milton 43 May-Sept. 50 114	NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1953 - 67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
0200 Umatilla River near Gibbon 50 May-July 42 119 0210 Umatilla River at Pendleton 83 May-July 75 110 0110 Walla Walla, No. Fork near Milton 9.2 May-July 8.2 112 0100 Walla Walla, So. Fork near Milton 43 May-July 38 114	0320	Butter Creek near Pine City	4.5	May-July	4.0	112
0210 Umatilla River at Pendleton 55 May-Sept. 48 114 0210 Umatilla River at Pendleton 83 May-July 75 110 0110 Walla Walla, No. Fork near Milton 9.2 May-July 8.2 112 0100 Walla Walla, So. Fork near Milton 43 May-July 38 114	0225	McKay near Pilot Rock	12.0	May-Sept.	11.0	109
0210 Umatilla River at Pendleton 83 May-July 75 110 0110 Walla Walla, No. Fork near Milton 9.2 May-July 8.2 112 0100 Walla Walla, So. Fork near Milton 43 May-July 8.7 111 0100 Walla Walla, So. Fork near Milton 43 May-July 38 114	0200	Umatilla River near Gibbon	50	May-July	42	119
88 May-Sept. 80 110 112 112 113 114 114 114 114 114 115 115 115 115 116 116 116 117 117 118 118 119			55	May-Sept.	48	114
0110 Walla Walla, No. Fork near Milton 9.2 May-July 8.2 112 9.7 May-Sept. 8.7 111 0100 Walla Walla, So. Fork near Milton 43 May-July 38 114	0210	Umatilla River at Pendleton	83	May-July	75	110
9.7 May-Sept. 8.7 111 0100 Walla Walla, So. Fork near Milton 43 May-July 38 114			88	May-Sept.	80	110
0100 Walla Walla, So. Fork near Milton 43 May-July 38 114	0110	Walla Walla, No. Fork near Milton	9.2	May-July	8.2	112
			9.7	May-Sept.	8.7	111
57 May—Sept. 50 114	0100	Walla Walla, So. Fork near Milton	43	May-July	38	114
114) 00021			57	May-Sept.	50	114

SOIL MOISTURE		PROFILE	(Inches)		SOIL MOISTU	RE (Inches)	
STATION		DEPTH	CAPACITY	DATE	THIS	LAST	2 YEARS
NAME	ELEVATION				YEAR	YEAR	AGO
Athena-Weston Battle Mtn. Summit Emigrant Springs Tollgate	1700 4340 3925 5070	48 48 48 48	18.7 13.8 22.3 23.6	3/27 4/25 4/25 4/25	11.2 f 13.8 21.6 18.1	11.1 12.4 20.6 18.7	11.4 13.8 20.4 18.8

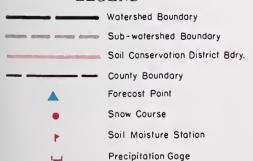
SNOW COURSE		DATE OF		WATER	WATER CONT		
	SNOW COURSE		SNOW DEPTH	WATER	WATER CONTENT (Inches		
NAME	ELEVATION	SURVEY	(Inches)	(Inches)	LAST YEAR	1953-1967 AVERAGE	
Arbuckle Mountain	5400	4/29	0	0.0	0.0	2.8 h	
Battle Mountain Summit	4340	4/25	0	0.0	0.0	0.3 "	
Blue Mountain Camp	4300	4/29	2	0.3	0.0	3.3 h	
Emigrant Springs	3925	4/25	2	0.6	0.0	1.1,	
Lucky Strike	5050	4/30	25	10.5 j	2.0	8.5 h	
Meacham	4300	4/25	3	0.5	0.0	2.1	
Tollgate	5070	4/29	30	13.8	0.0	18.0	
Walla Walla Diversion	3400	5/1	0	0.0			
Weston Mountain	2700	4/29	0	0.0	0.0	0.0	

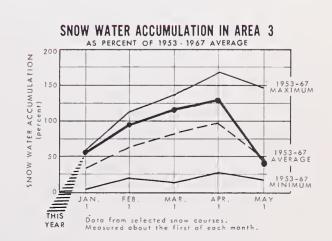
⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS



LEGEND





Umatilla, Walla Walla, Willow, Rock, Lower John Day Watersheds



WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS **OREGON**

as of MAY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Excellent water supplies will be available to most farmers and ranchers in Grant and Wheeler Counties in 1969. Soil moisture is excellent and will facilitate runoff from spring rains.

SNOW COVER

Rapid melt of mountain snow occurred in early April from warm temperature but snow still remains at higher elevations. The snowpack is 66 percent of average for this time of year.

PRECIPITATION

Generous amounts of rain fell over the area in April. According to the U.S. Weather Bureau precipitation was 146 percent of average.

STREAMFLOW

Provisional runoff data provided by the U.S. Geological Survey indicated a flow 148 percent of average for the John Day at Service Creek.

Selected revised April-September volume forecasts are as follows:

Stream	Forecast Acre Feet	Percent of 1953-67 Average
John Day at Prairie City	59,000	128
John Day, Mid. Fk. at Ritter	146,000	126
Strawberry near Prairie City	8,600	102

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1969

STREAM or AREA	FLOW F	PERIOD	RESERVOIR	USABLE	MEASURED (First of Mont.		
OTREAM OF AREA	SPRING SEASON	LATE SEASON	KESEKVOIK	CAPACITY	THIS YEAR	LAST YEAR	1953 AVE
ech Creek ech Creek-Fox-Long Cr. idge-Mountain Creeks mas Creek erry Creek dian-Pine Creeks hn Day River, Main Fork hn Day River, Mid. Fork hn Day River, N. Fork hn Day River, S. Fork nument-Kimberly rawberry Creek	Average Excellent Average Excellent Excellent Average Excellent Excellent Excellent Excellent Excellent Excellent Average	Average					

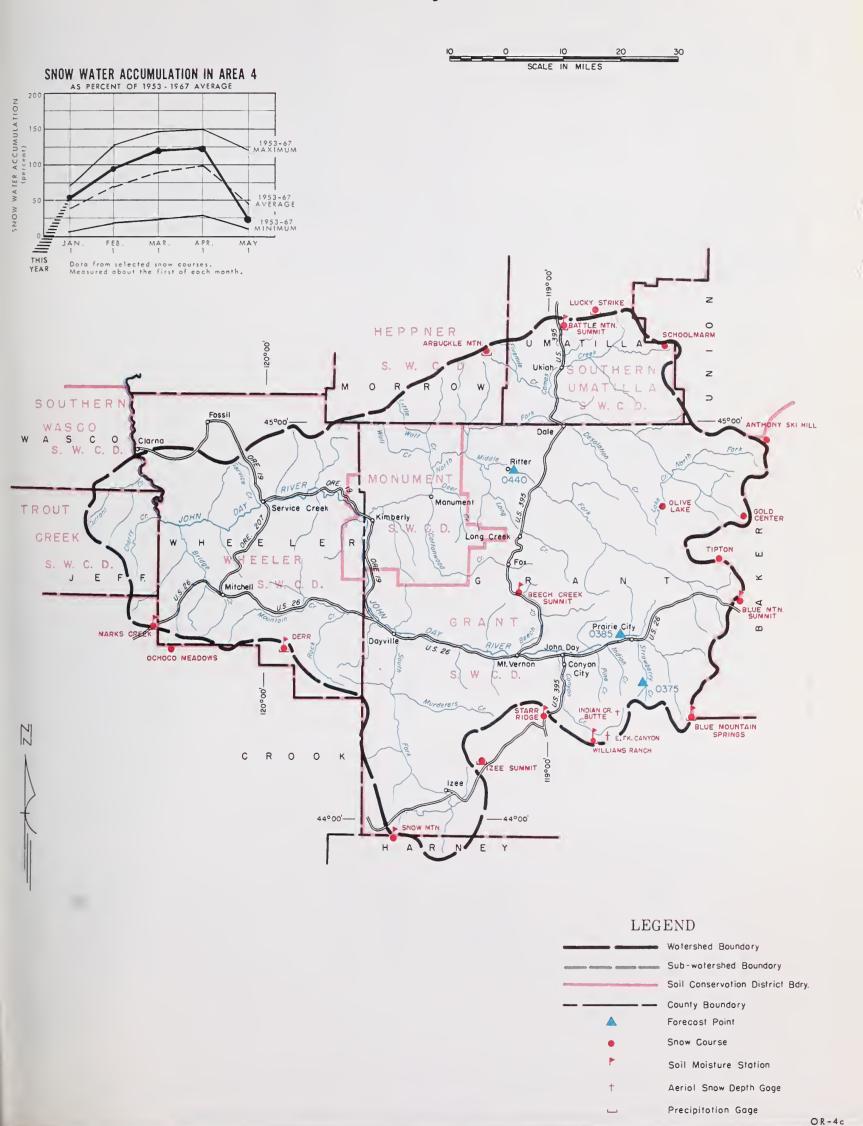
STREAMFLOW FORECASTS a (1,000 Ac. Ft.) as of May 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953 - 67 AVERAGE	THIS YEAR AS PERCEN
NO.	NAME				OF AVERAGE
0385	John Day at Prairie City	52	April-July	42	124
		59	April-Sept.	46	128
0440	John Day, Middle Fork at Ritter	140	April-July	112	125
		146	April-Sept.	116	126
0375	Strawberry near Prairie City	7.9	April-July	7.7	103
		8.6	April—Sept.	8.4	102

SOIL MOISTURE		PROFILE (Inches)		SOIL MOISTURE (Inches)			
STATION		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION	<u> </u>			1500	TEAN	AGO
Battle Mountain Summit Beech Creek Blue Mountain Springs Blue Mountain Summit Derr Marks Creek Snow Mountain Starr Ridge Williams Ranch	4340 4800 5900 5100 5670 4540 6300 5150 4500	48 42 36 24 36 48 36 42	13.8 21.3 16.9 16.8 9.0 14.1 16.7 10.6 17.9	4/25 4/30 4/28 4/24 3/28 4/25 3/25 4/30 4/30	13.8 17.6 12.5 16.2 8.9 f 13.4 14.8 f 10.6 17.6	12.4 15.0 12.9 13.0 8.9 f 11.8 12.2 f 10.5	13.8 17.3 12.1 13.2 8.1 f 13.5 15.5 f 10.5

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER JOHN DAY WATERSHEDS



Upper John Day Watersheds

NOW		CURRENT INFORMATION			PAST RECORD	
SNOW COURSE		DATE OF	SNOW DEPTH	WATER CONTENT	WATER CONT	TENT (Inche
NAME	ELEVATION	SURVEY	(Inches)	(Inches)	LAST YEAR	1953-1967 AVERAGE
inthony Lake	7125	4/28	56	96 (20.0	,
buckle Mountain	5400	4/29	0	26.6	22.2	30.3 ^h
attle Mountain Summit	4340			0.0	0.0	2.8 H
eech Creek Summit		4/25	0	0.0	0.0	0.3
lue Mountain Springs	4800	4/30	0	0.0	0.0	0.6
lue Mountain Summit	5900	4/28	11	5.0	0.0	8.4
	5098	4/29	3	1.3	0.0	1.9
err	5670	C				1.0
ast Fork Canyon	5700	c ;				
old Center	5340	4/28	1	0.5	0.0	4.2
ndian Creek Butte	6550	<i>b</i> .	_	0.0		4.2
zee Summit	5293	4/30	0	0 0		16.1
ucky Strike	5050	4/30		0.0	0.0	1.9
arks Creek			25	10.5 J	2.0	8.5
choco Meadows	4540	4/25	T	T	0.0	${f T}$
	5200	c^{\cdot}				
live Lake	6000	4/24	52	19.2	12.0	16.5
choolmarm	4775	5/2	0	0.0	0.0	0.6
now Mountain	6300	c!				0.0
tarr Ridge	5150	4/30	0	0.0	0.0	0.6
ipton	5100	4/30	Ö	0.0	0.0	
illiams Ranch	4500		0	0.0	0.0	1.6 h
	1000	c				
	1					



WATER SUPPLY OUTLOOK UPPER DESCHUTES, CROOKED WATERSHEDS

OREGON

as of .MAY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Near average to above average water supplies are in prospect for most water users on the Deschutes and Crooked River watersheds.

SNOW COVER

Rapid melt of the snowpack on the Crooked River and lower elevations of the Deschutes occurred early in April. The snowpack remaining at higher elevations in the Cascades is slightly above normal for this time of year.

PRECIPITATION

Rainfall was 77 percent of average in April according to the U. S. Weather Bureau.

RESERVOIR STORAGE

Prineville Reservoir is now full and spilling. Ochoco Reservoir contains 33,800 acre feet and will come close to filling. The Upper Deschutes reservoirs, Wickiup, Crescent Lake and Crane Prairie, contained 226,900 acre feet. Stored water, in addition to the natural flow of the Deschutes River at Bend, plus some pumping from the Crooked River, will provide near average supplies for the North Unit.

STREAMFLOW

Streamflow, as indicated by the 118 percent of average volume recorded on the Deschutes at Moody, was mostly above average in April.

Selected volume forecasts for the area are as follows:

<u>Stream</u> Po	eriod Forecast (a	.f.) % 1953-67	Average
Crane Prairie Total Inflow May Crescent near Crescent Lake May Deschutes at Benham Falls May Little Deschutes near Lapine Apr Crooked near Post May	y-Sept 136,000 y-Sept 19,000 y-Sept 425,000 y-Sept 100,000 y-Sept 40,000 y-Sept 12,000	122 79 83 105 100	Average

. Report prepared by .

TOM GEORGE

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST. PORTLANO, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

RESERVOIR STORAGE	(1,000	Ac. Ft.)	May 1,	1969
	HEARLE	MEASURED	(First of	Month)

STREAM or AREA	FLOW	PERIOD
SIREAW OF AREA	SPRING SEASON	LATE SEASON
Arnold Irrigation District Bear Creek Beaver Creek Camp Creek Central Ore. Irrig. Dist. Crooked River Deschutes River Hay-Trout Creeks Lone Pine Irrig. Dist. Mill Creek North Unit Irrig. Dist. Ochoco Creek Sisters Irrigation Dist. Snow Creek Irrig. Dist. Squaw Creek Irrig. Dist. Swalley Ditch Tumalo Project Walker Basin Irrig. Dist.	Average	Average Excellent Average Average

RESERVOIR	USABLE	MEASUR	ED (First o	f Month)
RESERVOIR	CAPACITY	THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Crane Prairie Crescent Lake Ochoco Prineville Wickiup	55.3 86.9 47.5 153.0 200.0	31.6 32.5 33.8 153.6 168.2	32.3 48.2 18.0 119.6 169.3	45.8 50.7 38.5 147.1 ^m 193.7

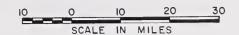
STREAMFLOW FORECASTS a (1,000 Ac. Ft.) as of May 1, 1969

NO.	FORECAST POINT	FORECAST THIS YEAR	FORECAST PERIOD	1953 - 67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ¹
0535 0600 0795 0645 0500 0630 0848 0555 0750 0730	Crane Prairie Reservoir total Inflow Crescent at Crescent Lake d Crooked near Post Deschutes at Benham Falls d Deschutes below Snow Creek Deschutes, Little near Lapine d Ochoco Reservoir net Inflow Odell near Crescent Squaw near Sisterd; Tumalo near Bend	82 136 15.0 19.0 38 40 240 425 61 83 100 12.0 34 51	May-July May-Sept. May-July May-Sept. May-July May-Sept. May-July May-Sept. May-Sept. April-July April-Sept. April-Sept. April-Sept. April-Sept. April-Sept. April-Sept.	68 111 18.5 24 38 40 305 509 59 83 95 12.1 30 51	120 122 81 79 100 100 79 83 103 100 105 99 113 100 110

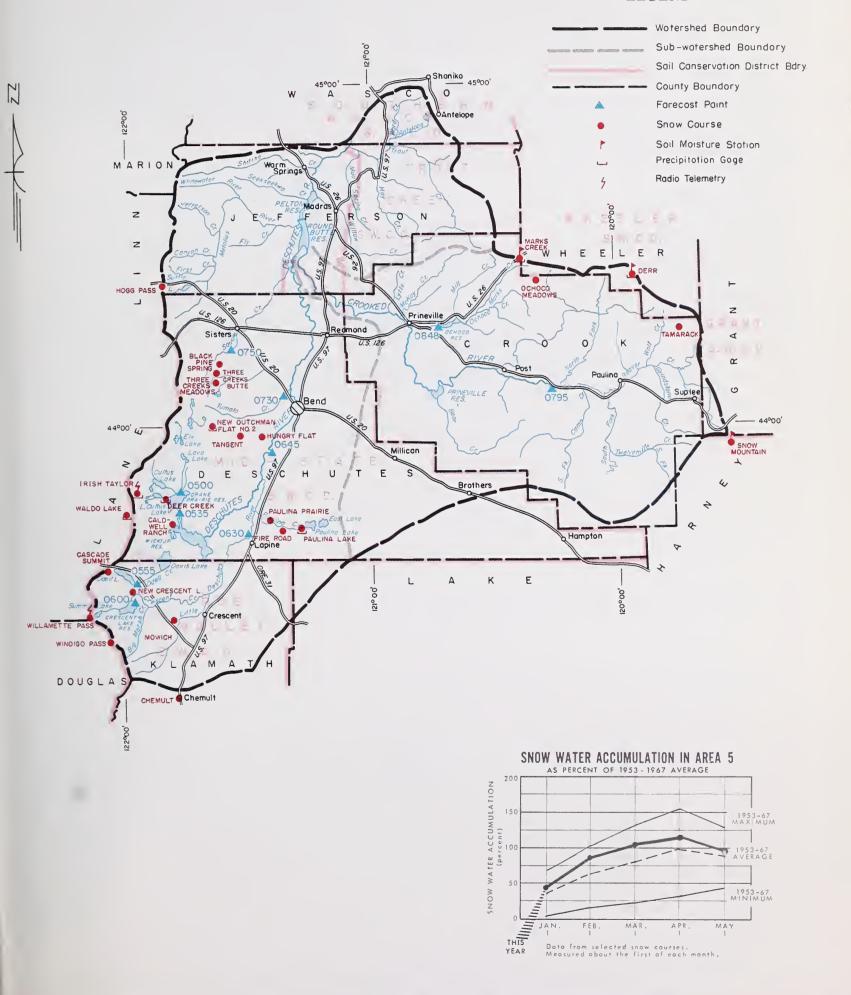
DIL MOISTURE		PROFILE (Inches)			SOIL MOISTUR	RE (Inches)	
STATION		DEPTH CAPACITY	ĎATE	THIS	LAST	2 YEARS	
NAME	ELEVATION	L			YEAR	YEAR	AGO
Derr Marks Creek Snow Mountain	5670 4540 6300	24 36 48	9.0 14.1 16.7	3/28 4/25 3/25	8.9 f 13.4 f 14.8 f	8.9 f 11.8 f 12.2 f	8.1 13.5 15.5

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER DESCHUTES, CROOKED WATERSHEDS



LEGEND



Upper Deschutes, Crooked Watersheds

SNOW			CURRENT INFORMATION			PAST RECORD	
SNOW COURSE		DATE OF	SNOW DEPTH	WATER CONTENT	WATER CONTENT (Inches)		
NAME	ELEVATION	SURVEY	Y (Inches)	(Inches)	LAST YEAR	1953-1967 AVERAGE	
Black Pine Spring	4600	4/30	0	0.0	0.0	0.3	
Caldwell Ranch	4400	c					
Cascade Summit	4880	4/28	66	30.7	7.7	25.3	
Chemult	4760	4/29	T	0.1	0.0	0.8,h	
Deer Creek	4554	c				0.0	
Derr	5670	c					
Fire Road	5050	DIS	CONTINUED				
Hogg Pass	4755	5/1	104	49.1	20.2	41.6	
Hungry Flat	4400	4/29	0	0.0	0.0	0.0	
Irish-Taylor	5500	c					
Marks Creek	4540	4/25	T	Т	0.0	T: h	
Mowich	4700	4/29	0	0.0	0.0	0.0 h	
New Crescent Lake	4800	4/29	11	5.3	0.0	5.1	
New Dutchman Flat #2	6400	4/29	101	49.8	27.7	54.3	
Ochoco Meadows	5200	c			_,,,	01.0	
Paulina Lake	6330	DIS	CONTINUED				
Paulina Prairie	4285	DIS	CONTINUED				
Snow Mountain	6300	с					
Tamarack	4800	с					
Tangent	5400	4/29	24	10.9	Т	11.9	
Three Creeks Butte	5200	4/30	4	1.6	0.0	2.6	
Three Creeks Meadows	5650	4/30	38	19.0	1.0	13.2	
Waldo Lake	5500	b	ŀ		15.5		
Willamette Pass	5600	4/28	94	46.6	26.3	42.4	
Windigo Pass	5800	4/29	88	42.2	21.6	44.0	



WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

OREGON

as of

MAY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Above average water supplies are in prospect during the spring and summer of 1969 for water users in Hood River and Wasco Counties.

SNOW COVER

Warm temperatures during late March and early April melted the low and some median elevation snow. High elevation areas gained 1 to 2 inches of water. The average snowpack was 135 percent of the normal on May 1.

PRECIPITATION

The U.S. Weather Bureau reports the precipitation for the area was 56 per cent of normal. This is the third month the precipitation has been half or less than half of normal.

SOIL MOISTURE

Soils remain well wetted and will favor runoff from snowmelt and spring rains.

RESERVOIR STORAGE

Clear Lake Reservoir contains 4,100 acre feet of water compared to an average of 4,900 acre feet.

STREAMFLOW

Forecasts of expected streamflow for the period May-September are as follows:

<u>Stream</u>	/olume (a.f.)	Percent of 1953-67 Average
Hood River, West Fork near Dee	319,000 159,000 136,000	131 142 132

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.)

1/1	٦	1969
May	1 -	1.909

STREAM or AREA	FLOW PERIOD			
STREAM OF AREA	SPRING SEASON	LATE SEASON		
Aldridge Ditch (Tony Creek) Badger Creek Dee Irrigation District East Fork Irrig. Dist. Farmers Irrigation Dist. Hood River Irrig. Dist. Juniper Flat Middle Fork Irrig. Dist. Mile Creeks Mill Creek Mount Hood Irrig. Dist. Rock-Gate-Threemile Crs. Tygh Creek White River	Excellent	Average		

				1, 1505		
RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)				
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE		
Clear Lake	11.9	4.1	3.8	4.9		

SOIL MOISTURE		PROFILE	(Inches)	SOIL MOISTURE (Inches)			
STATION NAME ELEVATION		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO

STREAMFLOW FORECASTS a (1,000 Ac. Ft.) as of May 1, 1969

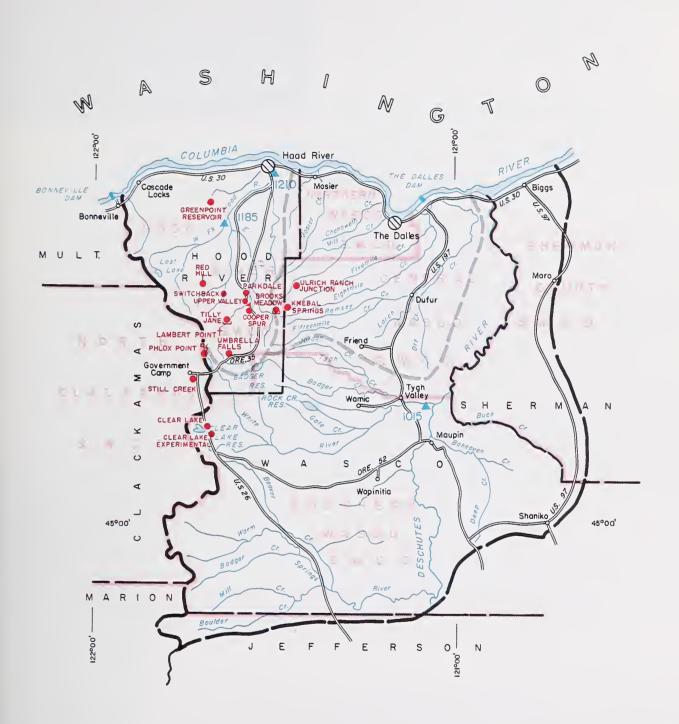
NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ¹
1210	Hood near Hood River	250 319	May-July May-Sept.	189 243	132 131
1185	Hood, West Fork near Dee	129 159	May-July May-Sept.	90 112	143 142
1015	White below Tygh Valley	113 136	May-July May-Sept.	86 103	132 132
		150	may—Dept.	100	102

SNOW		CURRENT INFORMATION			PAST RECORD	
SNOW COURSE			SNOW DEPTH	WATER CONTENT	WATER CONTENT (Inches	
NAME	ELEVATION	SURVEY	(Inches)	(Inches)	LAST YEAR	1953-1967 AVERAGE
Brooks Meadow	4300	c				
Clear Lake	3500	4/29	35	15.7	0.0	4.8 h
Clear Lake (Experimental)	3500	4/29	39	17.6	0.0	12.4 h
Cooper Spur	3490	5/5	T	${f T}$	0.0	
Greenpoint Reservoir	3400	с				-
Knebal Springs	3850	c				
Parkdale	1770	с				
Phlox Point	5400	4/29	150	72.9	31.6	65.6
Red Hill	4400	c			1	
Still Creek	3670	4/29	72	33.0	3.0	19.0
Switchback	3 255	c				
Tilly Jane	6000	с				
Ulrich Ranch Junction	3350	с				
Umbrella Falls	5400	5/1	160	79.7	40.5	
Upper Valley	2.530	с				

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

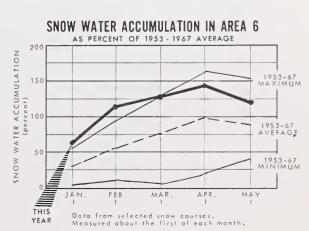
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS







Wotershed Boundary
Sub-watershed Baundary
Soil Conservation District Bdry.
County Boundary
Forecast Point
Snow Course
t Aerial Snaw Depth Gage
Soil Moisture Station
Precipitation Gage
Temperature Gage
Radio Telemetry



Hood, Mile Creeks, Lower Deschutes Watersheds



WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS **OREGON**

as of MAY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Water supply outlack for the 1969 summer season continues good to excellent for all parts of the Columbia Basin and adjacent Pacific Northwest watersheds. Flow of the upper Columbia and Kootenai Rivers for the remainder of the season is expected to be near but slightly below average. Near or above average flows are expected from streams of Montana, Washinton, northern Idaho, Wyoming and Oregon. Southern Idaho streams should yield average to much above average amounts.

SNOW COVER

Snowfall during April was generally near or above normal in northern Idaho, western and northeastern Oregon, and most of Washington. It was muci above normal in British Columbia, much below normal in southeastern Oregon, southern Idaho and central and southwestern Washington. Generally above normal temperature caused heavy depletion of the low elevation snowpack, particularly in southeastern Oregon and southern Idaho.

RESERVOIR STORAGE

Storage is generally above average, last month's deficit having been overcome by heavy April runoff from low elevations. Power reservoirs on the main stem Columbia and tributaries have above normal amounts in storage as a result of early filling to maintain the low water elevation in Franklin Roosevelt Lake during construction at the third power house.

STREAMFLOW

April runoff from low elevation watersheds has been heavy, as illustrated by the Owyhee River which produced 433 percent average. The flow of the Columbia River at The Dalles, Oregon, as reported by the U.S. Geological Survey, was above average for the sixth time during the past seven months. The record by months for the 1969 water year follows:

Month	Percent of	Average D	isch	arge (1953-67)
October	119	(Adjusted	for	Storage)	
November	128	H .	14	"	
December	104	60	99	H	
January	134	11	11	M	
February	95	11	##	99	
March	113	11	99	11	
April	166	11	11	11	
•					

Report prepared by -

STREAMFLOW FORECASTS a (1,000 Ac. Ft.) as of April 1, 1969

NO.	FORECAST POINT	FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT, OF AVERAGE
1057	Columbia at The Dalles	66,300 100,000	MAY-JUNE MAY-SEPT.	59,688 92,457	111 109

HISTORICAL DATA (Columbia River at The Dalles)

	S	STREAMFLOW (1,000 A.F.)	PEAK	
YEAR	APR SEPT.	APR. — JUNE	MAY - JUNE	(1,000 c.f.s)	DATE
1946	108,100	75,400	59,600	581	May 30
1947	100,300	70,000	56,800	536	May 11
1948	130,500	94,600	81,900	999	May 31
1949	95,700	71,400	56,000	622	May 18
1950	120,400	74,700	61,200	744	June 25
1951	113,000	75,600	59,100	597	May 26
1952	107,700	77,500	57,300	557	May 28
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18
1965	114,137	80,024	62,477	520	June 9
1966	87,268	58,120	45,922	396	June 12
1967	107,771	72,903	65,112	622	June 10
53-67 Avg.	105,181	72,408	59,689	574	

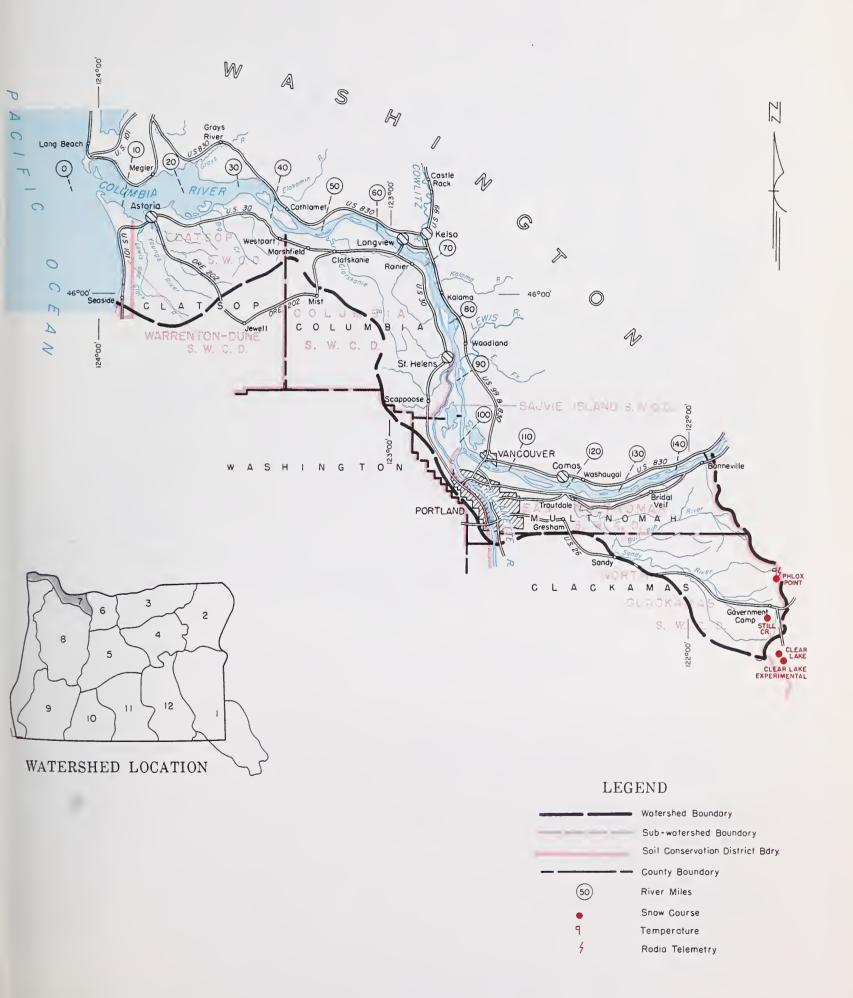
LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

		DRAINAGE DISTRICT PUMPHOUSE							
VANCOUVER	FLOW AT	SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON	
GAGE	THE DALLES				RIVER MILES		•		
(Weather Bu.)	(1,000 c.f.s)	118.9	96.0	91. 0	77. 0	62.0	52.0	47.0	
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5	
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0	
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3	
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7	
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0	
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4	
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8	
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4	
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0	
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7	
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3	
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2	
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0	
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7	
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6	
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4	
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3	
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1	
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9	
16	452	22.4	16.5	15.5	13.7	10.5	9.3	8.7	

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

LOWER COLUMBIA WATERSHEDS









WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

as of

U. S. D. A. SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers and other water users in the Willamette Valley will have above average water supplies during the spring months and average supplies for the summer season of 1969.

SNOW COVER

Snow at the higher elevations during the month resulted in slight gains in water content in these areas. The May 1 snowpack was 126 percent of normal compared to the 123 percent measured on April first. The snow line has receded to about 3,000 feet as a result of above normal temperatures the last week in March and the first week in April.

SOIL MOISTURE

Soils are well wetted below the snowpack and will facilitate runoff from snow-melt and spring rains.

PRECIPITATION

The valley precipitation in the Willamette Basin averaged 87 percent of normal as reported by the U. S. Weather Bureau.

RESERVOIR STORAGE

The multiple purpose reservoirs on the upper Willamette have been filling during April and were at near normal levels for May first.

STREAMFLOW

The adjusted April flow of Middle Fork of Willamette below the North Fork was 114 percent of normal with the October-April flow at 102* percent of the 15-year average. The forecast for the April-September period is 898,000 a.f. which is 108 percent of average.

Forecasts for tributaries of the Willamette for the April-September period are as follows:

(continued)

Stream Station	Volume (a.f.)	Percent of 1953-67 Average
Row River near Dorena McKenzie R. at McKenzie Br.	129,000	11 <i>7</i> 105
So. Santiam - Waterloo No. Santiam - Mehama Willamette at Salem Clackamas R. at Estacada	698,000 1,133,000 5,199,000 953,000	114 126 100 119

^{*}Provisional data from U. S. Geological Survey.

WATER SUPPLY OUTLOOK expressed as "Paor", "Fair" "Average" or "Excellent"

FLOW PERIOD STREAM or AREA SPRING SEASON LATE SEASON Excellent Average Calapooya Clackamas Excellent Average Average Average McKenzie Excellent Molalla Average Santiam, North Excellent Average Santiam, South Excellent Average Willamette, Coast Fork Willamette, Middle Fork Average Average Average Average

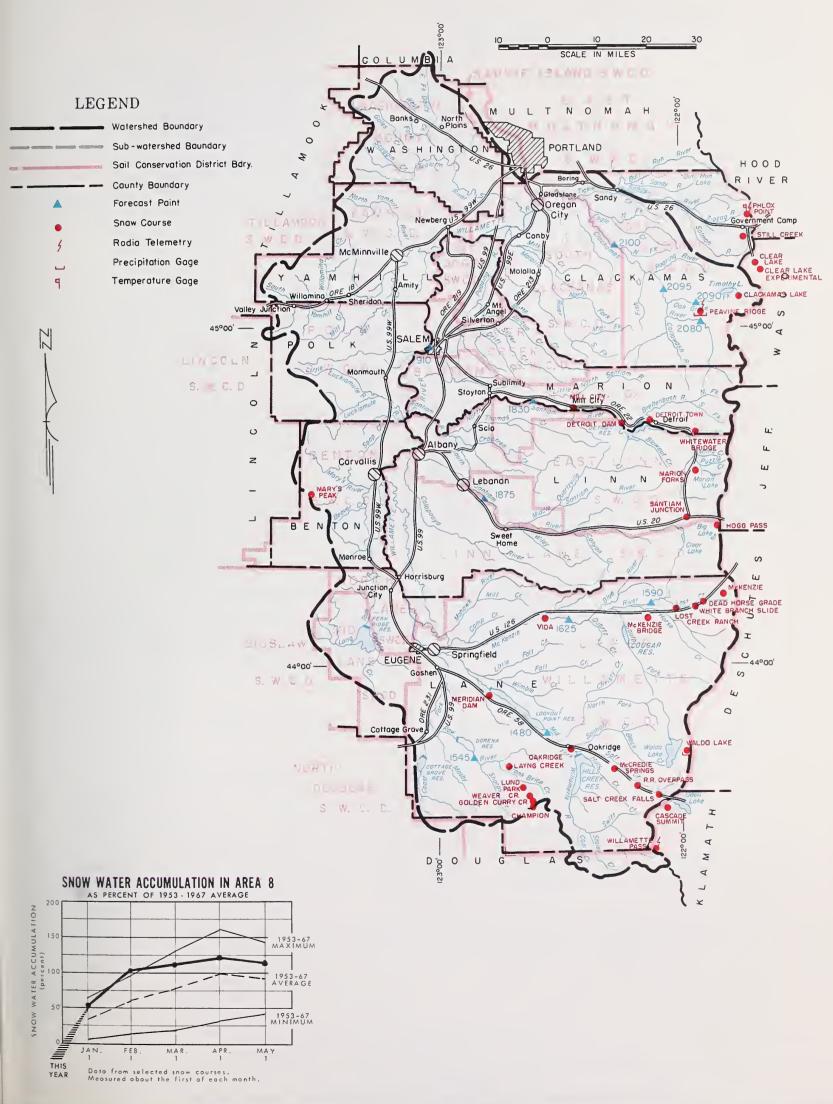
RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1969

RESERVOIR	USABLE	MEASURED (First of Month)				
RESERVOIR	CAPACITY	THIS YEAR	LAST YEAR	1953-1967 AVERAGE		
Cottage Grove Cougar Detroit Dorena Fall Creek Fern Ridge Foster Green Peter Hills Creek Lookout Point Timothy Lake *Multiple purpose reservoirspace reserved primarily for flood runoff.	30.0* 155.2* 299.9* 70.5* 115.0* 94.2* 30.0* 270.0* 200.0* 337.2* 61.7	22.7 128.7 242.2 53.9 13.2 79.6 25.0 228.4 141.0 227.4 51.1	19.8 112.1 242.0 53.5 86.6 91.1 0.0 219.6 147.8 207.5 60.1	24.0 231.8 53.8 86.6 163.1 290.3 55.3		

NO.	FORECAST POINT NAME						FORECAST PERIOD	1953 – 67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
2080	Clackamas at Big Bottom	166	April-July	134	124				
2000	Oldckamas at big bottom	210	April-Sept.	166	127				
2100	Clackamas at Estacada	833	April-July	689	121				
	02400444	953	April-Sept.	800	119				
2095	Clackamas above Three Lynx	624	April-July	517	123				
	,	723	April-Sept.	610	118				
1590	McKenzie at McKenzie Bridge	500	April-July	465	108				
	, and the second	650	April-Sept.	614	105				
1625	McKenzie near Vida	1087	April-July	1087	100				
		1321	April-Sept.	1321	100				
2090	Oak Grove Fork above Power Intake	168	April-July	125	114				
		220	April-Sept.	163	110				
1545	Row near Dorena	122	April-July	106	115				
		129	April-Sept.	110	117				
1830	Santiam, North at Mehama ^d	1027	April-July	800	128				
		1133	April-Sept.	901	126				
1875	Santiam, South at Waterloo	680	April-July	596	114				
		698	April-Sept.	633	110				
1480	Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge d	797	April-July	725	110				
		898	April-Sept.	8 28	108				
1910	Willamette at Salem d	4696	April-July	4696	100				
		5199	April-Sept.	5199	100				

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WILLAMETTE WATERSHEDS



Willamette Watersheds

SNOW COURSE		DATE OF		WATER			
NAME			SNOW DEPTH	WATER CONTENT	WATER CONTENT (Inches)		
	ELEVATION	SURVEY	(inches)	(Inches)	LAST YEAR	1953-1967 AVERAGE	
Cascade Summit	4880	4 / 28	66	30.7	7.7	25.3	
Champion	4500	4/30	77	37.7	1.2	26.3 n	
Clackamas Lake	3400	С					
Clear Lake	3500	4/29	35	15.7	0.0	4.8 h	
Clear Lake (Experimental)	3500	4/29	39	17.6	0.0	12.4 h	
Dead Horse Grade	3800	4/28	47	22.7	0.0	11.9 h	
Detroit City	1610	5/1	0	0.0	0.0	0.0	
Detroit Dam	1580	5/1	0	0.0	0.0	0.0	
Golden Curry Creek	3136	4/30	0	0.0	0.0	3.1 m	
Hogg Pass	4755	5/1	103	49.1	20.2	41.6	
Layng Creek	1200	4/30	0	0.0	0.0	0.0 m	
Lost Creek Ranch	1956	4/28	0	0.0	0.0	0.0h	
Lund Park	1740	4/30	0	0.0	0.0	0.0h	
Marion Forks	2730	5/1	29	13.9	0.0	3.5 h	
Marys Peak	3620	4/28	58	28.6	0.5	7.4 m	
McCredie Springs	2120	4/28	0	0.0	0.0	0.0	
McKenzie	4800	4/28	107	54.5	20.0	45.2 <i>h</i>	
McKenzie Bridge	1372	4/28	0	0.0	0.0	0.0 h	
Meridian Dam	750	4/28		0.0	0.0	0.0 n	
Mill City	826	5/1	0	0.0	0.0	0.0	
Oakridge	1310	4/28	0	0.0	0.0		
Peavine Ridge	3500	4/25	54	25.1		0.0	
Phlox Point	5400	4/29	150	72.9		13.9h	
Railroad Overpass	2750	4/28	0	0.0	31.6	65.6	
Salt Creek Falls	4000	4/28	40	18.0	0.0	T	
Santian Junction	3990	5/1	37	18.7	0.0	10.2	
Still Creek	3670	4/29	72		0.0	12.1	
Timothy Lake	3295	5/1	29	33.0	3.0	19.0	
Vida	800		1	13.1		8 . 2 m	
Waldo Lake	5500	4/28	0	0.0	0.0	0.0 <i>h</i>	
Weaver Creek		b		0 0	15.5		
White Branch Slide	2440	4/30	0 T	0.0	0.0	0.0 m	
	2800 2175	4/28		T	0.0	1.1 h	
Whitewater Bridge Willamette Pass		5/1	0	0.0	0.0	T	
WIIIduelle Pass	5600	4/28	94	46.6	·26 . 3	42.4	



WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS **OREGON**

as of MAY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Average to above average water supplies are in prospect for water users in the Roque-Umpqua watersheds for the spring and summer of 1969.

SNOW COVER

Above normal temperatures the last week in March and first week of April melted most of the low and median elevation snow with about 127 percent of the normal snowpack remaining at the higher elevations.

PRECIPITATION

The U.S. Weather Bureau reported the precipitation for April was 94 percent of normal.

RESERVOIR STORAGE

Emigrant Lake, Howard Prairie and Hyatt Prairie Reservoirs held a total of 93,600 a.f. compared with a May 1 average of 91,000 acre feet. Fish Lake, with a May 1 average of 6,400 a.f., contained 4,100 acre feet. Fourmile Lake held 5,400 a.f. compared with an average of 11,800 acre feet. These reservoirs, with the exception of Fourmile Lake, should fill.

STREAMFLOW

Selected streamflow forecasts for the Rogue and Umpqua Basins are as follows:

Stream Station	Forecast Period	Volume In Acre Feet	Percent 1953-67 Average
North Umpqua nr. Toketee Falls	Apr-Sept	180,000	102
Rogue at Raygold	May-Sept	719,000	105
Hyatt Reservoir net Inflow	May-Sept	3,000	125
Fourmile Lake net Inflow	Apr-Sept	8,800	214
Little Butte, N. Fk. at Fish Lk.	Apr-Sept	20,000	139
Little Butte, S. Fk Lake Cr.	Apr-July	55,000	116
Illinois River near Kerby	Apr-Sept	277,000	131

Grants Pass Irrigation District should not have to go on canal alternation this year if average temperatures and precipitation prevail until the end of the forecast period.

Beport prepared by ____

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

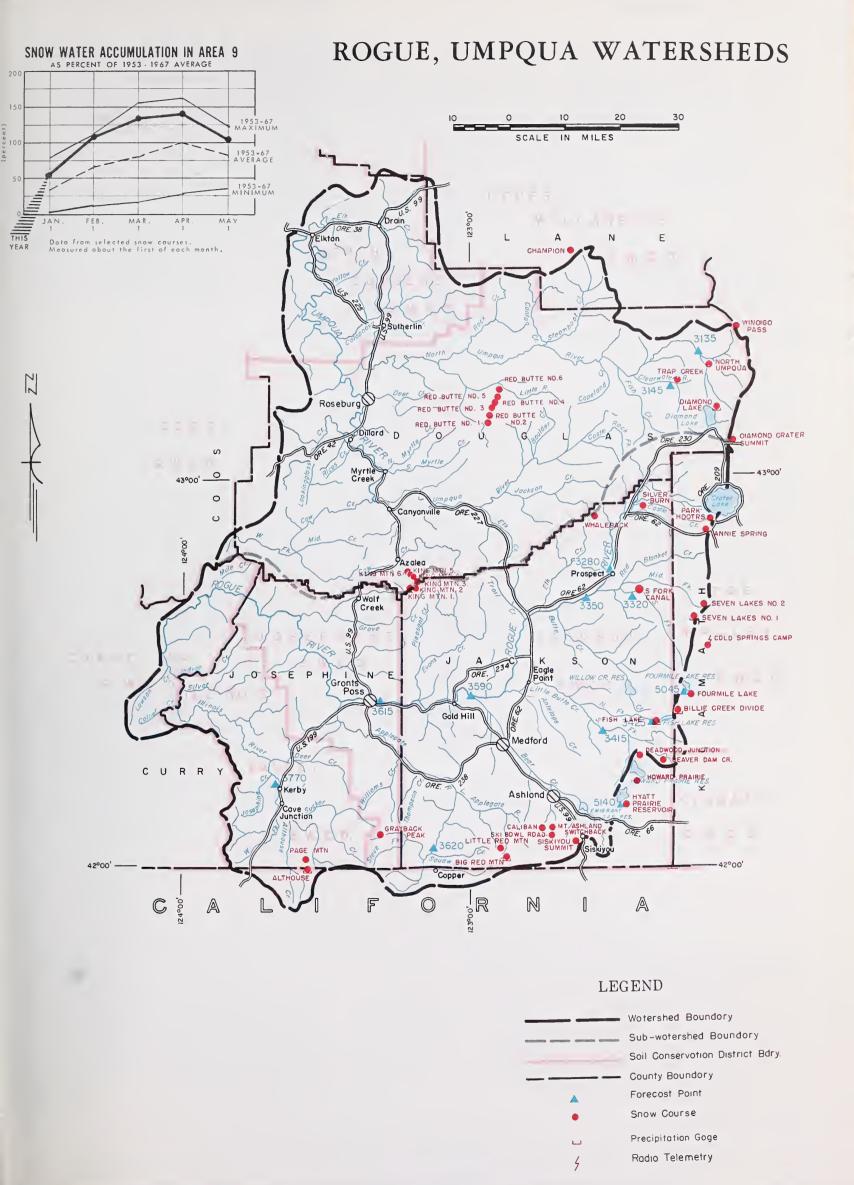
WATER SUPPLY OUTLOOK expressed as "Paar", "Fair" "Average" ar "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1969

STREAM or AREA	FLOW I	PERIOD	RESERVOIR	USABLE	MEASUR	RED (First o	of Mo
SIREAM OF AREA	SPRING SEASON LATE SEASON		CAPACITY	THIS YEAR	LAST YEAR	1953 AVE	
Althouse Creek	Excellent	Average	Emigrant Lake*	39.0	38.6	31.9	3
Applegate River, Big	Excellent	Average	Fish Lake	7.8	4.1	3.9	
Applegate River, Little	Excellent	Average	Fourmile Lake	16.1	5.4	5.7] :
Ashland Creek	Excellent	Average	Howard Prairie	60.0	41.4	42.9	4
Butte Creek, Big	Excellent	Average	Hyatt Prairie	16.1	13.6	11.4	[:
Butte Creek, Little	Excellent	Average					
Cow Creek	Excellent	Average	*Average for years				1
Deer Creek	Excellent	Average	of record (in base				
Elk Creek	Excellent	Average	period) after				
Emigrant Creek (abv. Res.)	Excellent	Average	reconstruction.				
Evans Creek	Average	Average				1	
Gold Hill Irrigation Dist.	Average	Average					
Grants Pass Irrig. Dist.	Average	Average					
Grave Creek	Excellent	Average					
Illinois River, East Fork	Excellent	Average					
Illinois River, West Fork	Excellent	Average					
Jump-off-Joe Creek	Excellent	Average					
Neil Creek	Excellent	Average					
Red Blanket Creek	Excellent	Average					
Rogue River	Average	Average					
Sucker Creek	Excellent	Average					
Table Rock Irrig. Dist.	Average	Average					
Thompson Creek	Excellent	Average					
Wagner Creek	Excellent	Average					
Williams Creek	Excellent	Average					

	FORECAST POINT	FORECAST THIS YEAR	FORECAST PERIOD	1953 - 67 AVERAGE	THIS YEAR AS PERCENT.
NO.	NAME	THIS TEAR			OF AVERAGE 1
3620	Applegate near Copper	202	April-Sept.	140	144
3145	Clearwater above Trap Creek d	60	May-Sept.	60	100
5045	Fourmile Lake net Inflow d	8.8	April-Sept.	4.1	214
5140	Hyatt Reservoir net Inflow d.	3.0	May-Sept.	2.4	125
3771	Illinois River near Kerby	273	April-July	205	133
	,	277	April-Sept.	211	131
3425	Little Butte, N. Fk. at Fish Lake nr. Lake Cr.	20	April-Sept.	14.4	139
3415	Little Butte, S. Fk. near Lake Creek	55	April-July	33	116
	Note: Minimum flow will drop to 100 c.f.s. by June 10.				
3 28 0	Rogue above Prospect	229	May-July	192	119
		272	May-Sept.	249	109
3320	Rogue, South Fork near Prospect ^d	49	May-July	46	106
		55	May-Sept.	57	96
3350	Rogue River below South Fork	458	May - July	413	111
2500		594	May-Sept.	551	108
3590	Rogue at Raygold near Central Point	559	May-July	525	106
3615	D+ G	719	May-Sept.	685	105
3135	Rogue at Grants Pass	662	May-Sept.	662	100
2122	Umpqua, No. blw. Lemolo Res. nr. Toketee Falls ^d	180	'April-Sept.	176	102
1					

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



SNOW		CUR	RENT INFORMA	TION	PAST RECORD		
SNOW COURSE		DATE OF	SNOW DEPTH	WATER	WATER CONT	ENT (Inches	
NAME	ELEVATION	SURVEY	(Inches)	CONTENT (Inches)	LAST YEAR	1953 - 1967 AVERAGE	
Althouse	4530	C					
Annie Spring	6018	4/29	104	53.5	25.7	43.1	
Beaver Dam Creek	5100	c	101	00.0	0.0	40.1	
Big Red Mountain	6500	с			0.0		
Billie Creek Divide	5300	4/30	44	22.7	0.0	13.9 ^h	
Caliban	6500	4/28	92	42.0	29.7	10.9	
Champion	4500	4/30	77	37.7	1.2	26.3 h	
Cold Springs Camp	6100	4/22	83	41.5	14.1	20.3	
Deadwood Junction	4600	5/5	0	0.0	0.0		
Diamond-Crater Summit	5800	4/23	79	37.0		36.1 ^h	
Diamond Lake	5315	4/23	46		16.9		
Fish Lake	4865	4/23	31	21.8	8.3	16.8	
	6000		56	14.6		5.1	
Fourmile Lake		4/30 c	36	27.8		21.6 ^h	
Grayback Peak	6000			0 0			
Howard Prairie	4500	5/5	0	0.0	0.0		
Hyatt Prairie Reservoir	4900	C			0.0		
King Mountain #1	4500	4/28	14	7.4	0.0		
King Mountain #2	4000	4/28	8	3.6	0.0		
King Mountain #3	3648	4/28	0	0.0	0.0		
King Mountain #4	3049	4/28	0	0.0	0.0		
King Mountain #5	2380	4/28	0	0.0	0.0		
King Mountain #6	1820	4/28	0	0.0	0.0		
Little Red Mountain	6500	<i>c</i> .					
Mt. Ashland Switchback	6400	4/28	86	38.2	31.0		
Mule Creek*	3680	4/30	4	1.9			
North Umpqua	4215	4/29	7	3.4	0.0	5.3	
Page Mountain	4 0 4 5	c_{\cdot}					
Park Headquarters	6450	4/29	139	68.4	39.3	59.1	
Red Butte #1	4560	4/28	44	22.8	0.0	12.6	
Red Butte #2	4000	4/28	14	6.8	0.0	3.7	
Red Butte #3	3500	4/28	0	0.0	0.0	1.2	
Red Butte #4	3000	4/28	0	0.0	0.0	0.0	
Red Butte #5	2500	4/28	0	0.0	0.0	0.0	
Red Butte #6	2000	4/28	0	0.0	0.0	0.0	
Seven Lakes #1	6800	c c		0.0	0.0	0.0	
Seven Lakes #2	6200	c					
Silver Burn	3720	4/29	18	9.2	0.0	3.0 ^t	
Siskiyou Summit	4630	c 4/25	10	9.4	0.0	3.0	
Ski Bowl Road		4/28	50	96 0	3.4.17		
	6000		59	26.8	14.7		
South Fork Canal	3500	4/29	0	0.0	0.0	0.0"	
Trap Creek	3800	4/29	9	4.3	0.0	5.4 ^h	
Whaleback	5140	C	0.0				
Windigo Pass	5800	4/29	88	42.2	21.6	44.0	
New snow course.							



WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

as of
MAY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Excellent water supplies are in prospect for Klamath Basin water users during the spring of 1969 with average supplies available for late summer.

SNOW COVER

Very little is left of the low elevation snowpack as the result of above normal temperatures during the last week in March and the first week in April. The snowpack was 134 percent of normal on May 1 compared to 146 percent of average on April 1.

PRECIPITATION

The Klamath watersheds received 72 percent of normal precipitation during April as reported by the U.S. Weather Bureau.

SOIL MOISTURE

Mountain watershed soils are at or near available water holding capacity and will facilitate runoff from spring rains.

RESERVOIR STORAGE

Because of heavy April streamflow from the melting snow, water stored in reservoirs in the area is at above average levels for this time of year. Upper Klamath Lake holds 555,700 acre feet with an average of 519,200 acre feet. Gerber Reservoir contains 90,400 acre feet compared to an average of 65,500. Clear Lake, with an average of 266,500 acre feet, is holding 329,600 acre feet.

STREAMFLOW

Forecasts of streamflow for the Klamath Basin are as follows:

Station	Period	Volume (a.f.)	Percent 1953-67 Avg.
Clear Lake Reservoir Inflow	May-Sept	20,000	132
Gerber Reservoir Inflow	May-Sept	9,000	180
Sprague River nr. Chiloquin	May-Sept	177,000	8 5
Inflow to Upper Klamath Lk.	May-Sept	420,000	109
Williamson R. below Sprague	May-Sept	340,000	103

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1969

OTOTALL ADDA	FLOW PERIOD						USABLE	MEASUR	ED (First o	f M
STREAM or AREA	SPRING SEASON L	LATE SEASON			THIS YEAR	LAST YEAR	195 AV			
Ft. Klamath Valley Lost River (Clear Lake) Lost River (Gerber) Lost River (Willow Res.) Sprague River Upper Klamath Lake Williamson River	Excellent Excellent Excellent Excellent Excellent Excellent	Average Average Average Average Average Average	Clear Lake Gerber Upper Klamath Lake	440.2 94.0 584.0	329.6 90.4 555.7	207.9 56.7 440.3	5			

FORECAST POINT	FORECAST	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT
NO. NAME	THIS YEAR		AVEITAGE	OF AVERAGE
Clear Lake Reservoir Inflow Cerber Reservoir Inflow Sprague near Chiloquin Upper Klamath Lake net Inflow Williamson below Sprague River	20 9.0 177 420 340	May-Sept. May-Sept. May-Sept. May-Sept. May-Sept.	15.1 5.0 208 386 331	132 180 85 109 103

OIL MOISTURE	PROFILE	(Inches)		SOIL MOISTU	RE (Inches)		
STATION		DEPTH	CAPACITY	DATE	THIS	LAST	2 YEARS
NAME	ELEVATION				YEAR	YEAR	AGO
Bly Mountain	5090	42	14.0	5/1	12.8	11.4	12.4

⁽a) Assuming normal meteorological contitions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, wat content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 193-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

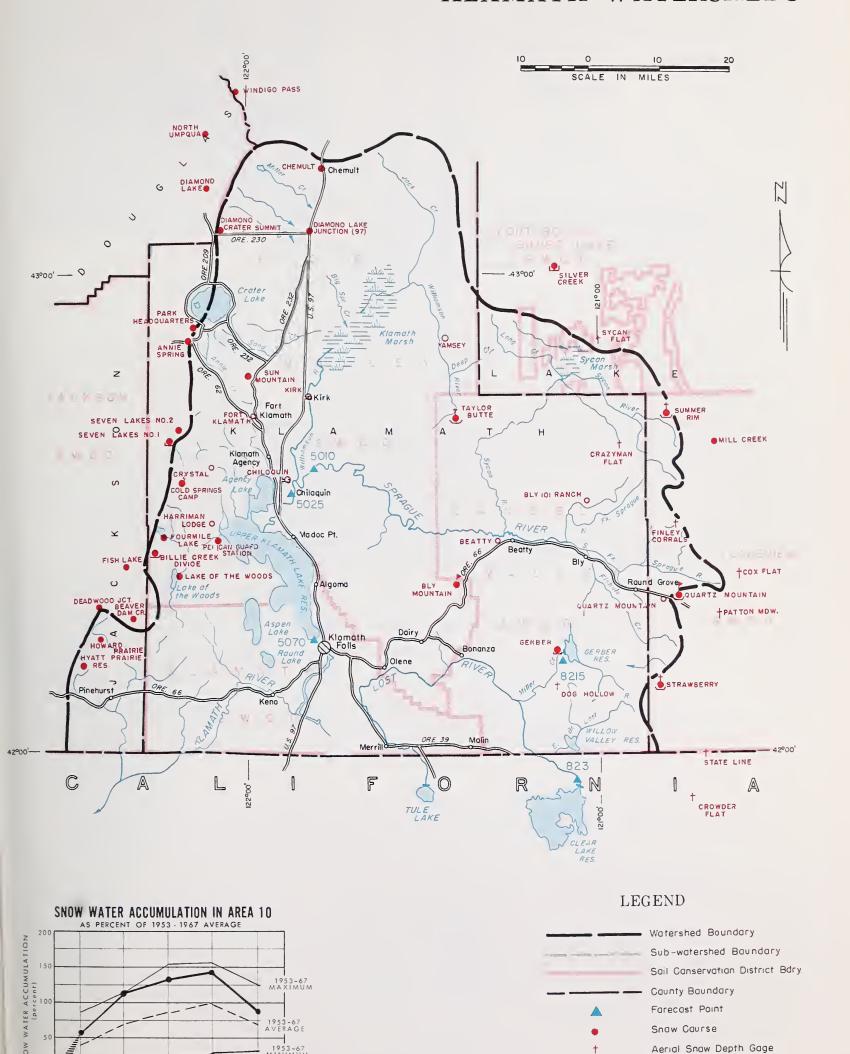
KLAMATH WATERSHEDS

PP&L Snow Stotion

Sail Maisture Station

Precipitotian Goge Radio Telemetry

0



Data from selected snow courses. Measured about the first of each month.

Klamath Watersheds

SNOW	CURRENT INFORMATION			PAST RECORD		
SNOW COURSE		DATE OF	SNOW DEPTH	WATER CONTENT	WATER CONT	ENT (Inches)
NAME	ELEVATION	SURVEY	(Inches)	(inches)	LAST YEAR	1953 - 1967 AVERAGE
Annie Spring	6018	4/29	104	53.5	25.7	43.1
Beatty (PP&L)	4300	c.			2017	10.1
Billie Creek Divide	5300	4/30	44	22.7	0.0	13.9 h
Bly Mountain	5090	4/30	0	0.0	0.0	1.0 m
Bly 101 Ranch (PP&L)	4800	c			1	1.0
Chemult	4760	4/29	T	0.1	0.0	0.8
Chiloguin (PP&L)	4187	c			1	""
Cold Springs Camp	6100	4/22	83	41.5	14.1	
Crazyman Flate	6100	4/25	12	5.8	0.0	
Crowder Flat (Calif.)	5200	c			""	
Crystal (PP&L)	4200	С				
Diamond-Crater Summit	5800	4/23	79	37.0	16.9	36.1 h
Diamond Lake Junction (97)	4600	4/23	0	0.0	0.0	0.0
Dog Hollow e	4900	c 2/20		0.0	0.0	0.0
Finley Corrals ^e	6000	4/25	22	10.0	0.0	
Fort Klamath (PP&L)	4150	c.	44	10.6	0.0	
	6000			07.0		a. a.b
Fourmile Lake		4/30	56	27.8		21.6 <i>h</i>
Gerber	4850	С.				
Harriman (PP&L)	4200	С.				
Hyatt Prairie Reservoir	4900	C			0.0	
Kirk (PP&L)	4533	C				,
Lake of the Woods	4960	4/29	23	9.2	0.0	6.3 h
Park Headquarters	6450	4/29	139	68.4	39.3	59.1
Pelican Guard Station	5150	4/22	0	0.0	0.0	0.0.
Quartz Mountain	5320	4/28	0	0.0	0.0	0.6 h
Quartz Mountain (PP&L)	5504	4/28	4	1.8	0.0	0.9
Seven Lakes #1	6800	С				
Seven Lakes #2	6200	С				
State Line (Calif.)	5750	С			1	
Strawberry	5760	4/26	6	2.9	0.0	1.4 h
Summer Rim	7200	4/25	39	18.7		
Sun Mountain	5350	5/2	52	25.3	8.6	
Sycan Flate	5500	С				
Taylor Butte	5100	4/21	1 [0.4		
Yamsey (PP&L)	4600	С				



WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

as of MAY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Lake County water users will have above average water supplies during the spring of 1969. Average supplies are in prospect for late summer.

SNOW COVER

Much of the low and midelevation snowpack was melted by the above normal temperatures that prevailed during the last week in March and the first week in April. Some melting has occurred at the higher elevations but the snow-pack there is 161 percent of normal.

PRECIPITATION

The U.S. Weather Bureau reports that Lake County, Goose Lake watersheds received 71 percent of normal rainfall during the month of April.

SOIL MOISTURE

Soils in the mountain watersheds remain near their available water holding capacity.

RESERVOIR STORAGE

The Drews Reservoir was full and spilling water by April 12. Cottonwood Reservoir is holding 8,100 acre feet and will fill to capacity the first week in May. No report is available from Thompson Valley Reservoir.

STREAMFLOW

Flow of the smaller streams in the area reached a peak during the first two weeks of April, then tapered off as cool temperatures prevailed in the area. Selected streamflow forecasts are as follows:

Station	Period	Volume Acre Feet	Percent of 1953-67 Average
Chewaucan near Paisley Deep above Adel	Apr-Sept Apr-Sept	105,000	1 2 5 1 6 9
Drews Res. net Inflow	May-Sept	15,000	133
Twentymile near Adel	Apr-Sept	29,600	172
Honey Creek near Plush	Apr-Sept	24,500	152

- Report prepared by -

TOM GEORGE

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST. PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

RESERVOIR STORAGE	(1,000	Ac. Ft.)	May	1,	1969
-------------------	--------	----------	-----	----	------

STREAM or AREA	FLOW I	PERIOD
SIREAM OF AREA	SPRING SEASON	LATE SEASON
Chewaucan River Crooked Creek Deep Creek Dry Creek East Side Goose Lake Guano Lake Honey Creek Lakeview Water Users Assn. Rock Creek (Hart Mtn.) Silver-Buck Creeks Summer Lake Thomas Creek Twentymile Creek Warner Lakes	Excellent	Average Excellent

1120	ERTOIR GIORAGE	(1,000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	May 1	, 1969
	RESERVOIR	USABLE	MEASUR	f Month)	
	RESERVOIR	CAPACITY	THIS YEAR	LAST YEAR	1953-1967 AVERAGE
D: Ti	ottonwood* rews hompson Valley verage for years f record (in base	8.7 63.0 19.5	8.1 63.5 b.	3.6 50.3 13.7**	5.8 54.3 14.8
p	eriod) after econstruction. April 25, 1968.				

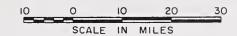
NO.	FORECAST POINT	FORECAST THIS YEAR	FORECAST PERIOD	1953 – 67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ¹
3840	Chewaucan near Paisley	95	April-June	75	126
		105	April-Sept.	84	125
3715	Deep above Adel	105	April-June	61	172
		110	April-Sept.	65	169
3385	Drews Reservoir net Inflow d	15	May-Sept.	11.3	133
3785	Honey near Plush	20	April-June	15.4	130
1		24.5	April-Sept.	16.1	152
3900	Silver Creek near Silver Lake	16.7	May-July	12.1	138
		19.0	May-Sept.	14.0	135
3660	Twentymile near Adel	27.7	April-June	16.3	170
		29.6	April-Sept.	17.2	172

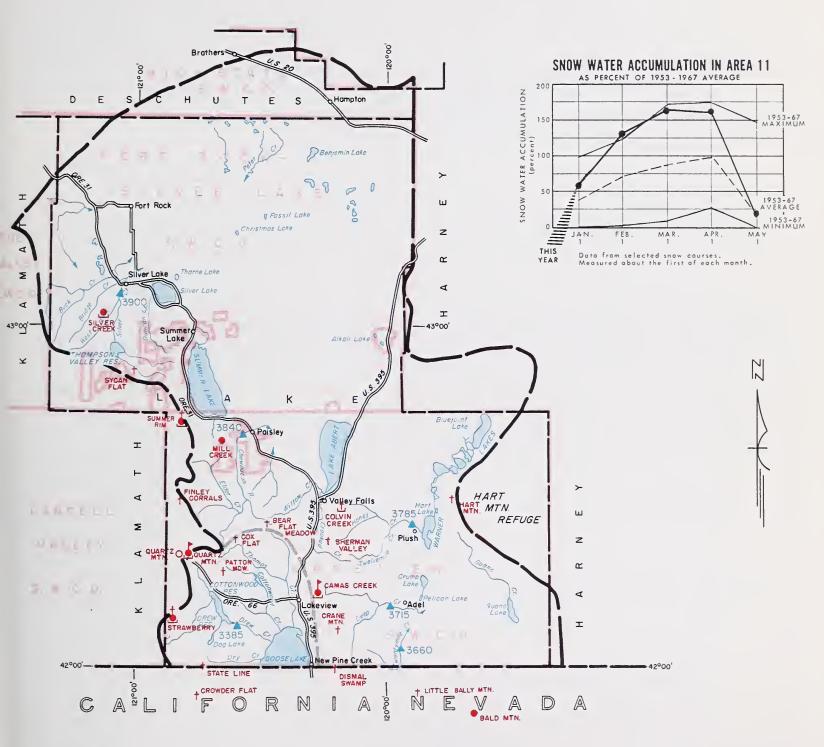
SOIL MOISTURE	PROFILE	(Inches)		SOIL MOISTU	RE (Inches)		
STATION		DEPTH	CAPACITY	DATE	THIS	LAST	2 YEARS
NAME	ELEVATION				YEAR	YEAR	AGO
Camas Creek Quartz Mountain	5720 5320	42 48	14.5 15.3	4/29 4/28	13.6 9.8	12.8 8.6	12.7 9.8

SNOW		CUR	RENT INFORMA	TION	PAST RECORD		
			1	WATER	WATER CONTENT (Inch		
SNOW COURSE			SNOW DEPTH	CONTENT		1953-1967	
NAME	ELEVATION	SURVEY	(Inches)	(Inches)	LAST YEAR	AVERAGE	
Adin Mountain (Calif.)	6350	5/5	23	9.6	0.0	3.4	
Bald Mountain (Nev.)	6720	c	20			0.1	
Bear Flat Meadow e	5900	С					
Camas Creek	5720	4/29	14	5.6	0.0		
Cedar Pass (Calif.)	7100	4/29	42	18.5	6.0	9.5	
Colvin Creek e	6550	Ċ					
Cox Flat e	5750	С					
Crane Mountain e	6020	С					
Crowder Flat e (Calif.)	5200	С					
Dismal Swamp e (Calif.)	7000	С					
Finley Corrals e	6000	4/25	22	10.6	0.0		
Hart Mountain e	6350	c					
Little Bally Mountain e (Nev.)	6600	С					
Mill Creek	6200	DIS	CONTINUED				
Patton Meadow en	6800	4/25	33	15.8	4.0		
Quartz Mountain (PP&L)	5504	4/28	4	1.8	0.0	0.9 m	
Quartz Mountain	5320	4/28	0	0.0	0.0	0.6 h	
Sherman Valley e	6600	С					
Silver Creek	4900	с			·		
State Line e (Calif.)	5750	c					
Strawberry	5760	4/26	6	2.9	0.0	1.4 h	
Summer Rim	7200	4/25	39	18.7			
Sycan Flat e	5500	С					

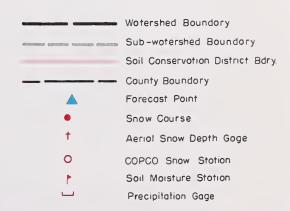
⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

LAKE COUNTY, GOOSE LAKE WATERSHEDS





LEGEND



Lake County, Goose Lake Watersheds



WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

as of
MAY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Water supply prospects in the Harney Basin continue to be above average for the spring months but a rapid melt of most of the snowpack during the last week in March and the first week in April indicates supplies will probably be average to below average later in the summer.

SNOW COVER

Early April temperatures that were I to 5 degrees above normal melted about all of the low and median elevation snowpack. The snow cover was reduced from 145 percent of normal on April 1 to 42 percent of normal on May 1.

PRECIPITATION

Rainfall for the Harney Basin averaged 0.96 inch which is normal for the month of April according to the U.S. Weather Bureau.

SOIL MOISTURE

Mountain watershed soils are filled to near their water holding capacity.

STREAMFLOW

Most streams in the area reached a peak flow during the first two weeks of April and then tapered off as below normal temperatures prevailed during the latter part of the month. Forecasts of expected streamflow for the April-September period of 1969 are as follows:

Stream Station	Acre Feet	1953-67 Average
Donner und Blitzen near Frenchglen	90,000	164
*Silver near Riley	30,000	167
Silvies near Burns	160,000	l 27
Trout Creek near Denio	16,800	224

*April-July

- Report prepared by

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1969

STREAM or AREA	FLOW PERIOD					
STREAM OF AREA	SPRING SEASON	LATE SEASON				
Catlow Valley Cow Creek Donner und Blitzen River Mill-Coffeepot Creeks Rattlesnake Creek Silver Creek Silvies River Soldier-Prather Creek Trout Creek Whitehorse Creek	Excellent	Average				

	(. , 5 5 5		riay I	, 1969						
RESERVOIR	USABLE	MEASURED (First of Month)								
RESERVOIR	CAPACITY	THIS YEAR	LAST YEAR	1953-1967 AVERAGE						

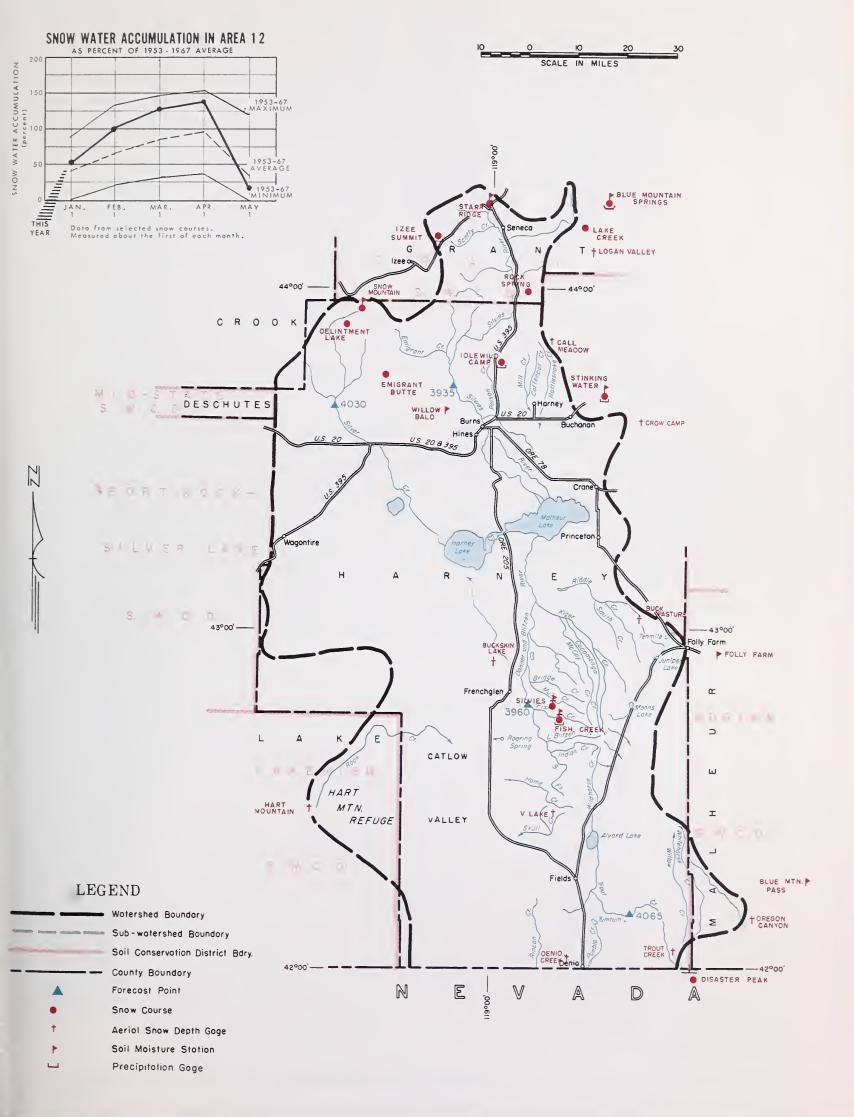
NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ¹
3960	Donner und Blitzen near Frenchglen	75 90	April-June April-Sept.	46 55	164
4030	Silver near Riley	30	April-July	17.9	164 167
3935	Silvies near Burns	103	April-June	79	130
4065	Trout near Denio	160 14.4 16.8	April-Sept. April-June April-Sept.	83 6.5 7.5	127 222 224

SOIL MOISTURE		PROFILE	(Inches)		SOIL MOISTURE (Inches)						
STATION	DEPTH	CAPACITY	DATE	THIS	LAST	2 YEARS					
NAME	ELEVATION	021111	OAI AOITT	JAIL	YEAR	YEAR	AGO				
Blue Mountain Spring	5900	42	16.9	4/28	12.5	12.9	12.1				
Fish Creek	7900	48	15.0	c							
Folly Farm	4450	30	12.5	с							
Silvies	6900	48	16.4	3/27	15.3 f	13.7 f	14.5 f				
Snow Mountain	6300	48	16.7	3/25	14.8	12.2	15.5 f				
Starr Ridge	5150	36	10.6	4/30	10.6	10.5	10.5				
Stinking Water	4800	48	21.9	4/28	21.9						
Willow-Bald	5000	24	6.6	4/28	6.6	4.2	6.6				

SNOW		CUR	RENT INFORMA	PAST RECORD			
SNOW COURSE		DATE OF	SNOW DEPTH	WATER CONTENT	WATER CONTENT (Inches		
NAME	ELEVATION	SURVEY	(Inches)	(Inches)	LAST YEAR	1953-1967 AVERAGE	
Blue Mountain Springs	5900	4/28	11	5.0	0.0	8.4 h	
Buck Pasture	5700	c					
Buckskin Lake	5200	с					
Call Meadows	5340	с					
Crow Camp	5500	с					
Delintment Lake	5600	С					
Denio Creek	6000	С					
Disaster Peak (Nev.)	6500	С					
Emigrant Butte	5000	С					
Fish Creek	7900	С					
Hart Mountain	6350	С					
Idlewild Camp	5200	5/1	0	0.0	0.0	0.9	
Izee Summit	5293	4/30	0	0.0	0.0	1.9 "	
Lake Creek	5120	с					
Oregon Canyon	6950	С					
Rock Spring	5100	5/1	0	0.0	0.0	0.4	
Silvies .	6900	С					
Snow Mountain	6300	С				,	
Starr Ridge	5150	4/30	0	0.0	0.0	0.6	
Stinking Water	4800	4/28	0	0.0			
Trout Creek	7800	С					
"V" Lake	6600	С					

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HARNEY BASIN WATERSHEDS



Harney Basin Watersheds

7,07	NAME SY FOR RCI		SEC THE REE	NUMBER	AME LOCATION ELEV	NUMBER	NAME	LOCATION ELEV	NUMBER	NAME LOCATION	e ELEV	NUMBER					
A No.	OWYHEE, MALHEUR WATERSHEDS (1)	16H3AP Mides 16G7MP Mud Flet	(Nev) 18 39N 46E 7200 (Ida) 34 9S 2W 5500	Eldorado P	ss 20 14S 38E 4600	18E23	Little Alps	10 7S 37E 6200		SEC TRP		HOPBEN	NAME	LOCATION ELEV	NUMBER	NAME	LOCATION ELEV
	Owyhee River	17654 Oregon Canyon 17H6a Quinn Ridge 16Gllap Red Canyon	9 40S 40E 6950 (Nev) 9 47N 41E 6300	18E18 Lake Creek	e 32 165 36E 4750 10 16S 33%E 5120	18E30 18E28 17D7P	Little Antone Power Plant Taylor Front	1 7S 37E 5000 33 7S 38E 3990	19D2P	Willow Creek Arbuckle Mountain 33 48	DOE 5400	0000	Santiam River		22G12	Fourmile Lake	9 36S 5E 6000
42	Astelope Ridge (Ida) 20 88 1E 5900 (Ida) 10 118 1E 5700 (Ida) 10 118 1E 5700	15H6MP Rodeo Flat 15H3A 76 Creek	(Ida) 32 11S 4W 6500 (Nev) 36 43N 53E 6800 (Nev) 6 44N 58E 7100	18F1 Rock Spring	23 18S 32E 5100	2,071	Taylar Green Pine Creek	3 6S 42E 5740	18E1P		29E 5400 37E 7125	22E1 22E2 21E6	Detroit (City) Detroit Dam	1 10S 5E 1610 7 10S 5E 1580	21G4P 22G26 22G16	Gerber Howard Prairie	12 39S 13E 4850 32 38S 4E 4500
16074 16074	Sattle Creek (Nev) 31 46N 58E 7800 (Nev) 30 45N 56E 6700 (Nev) 30 6E 5290	16F3AP* Silver City 18G1MPA Silvies	(Ida) 6 5S 3W 6400 35 32S 32NE 6900	18E32p* S. Fk. Will 18F4MP Stinking We	ow Cr. 2 215 34E 4800	17D8	Schneider Meadows	35 6S 45E 5400		UPPER JOHN DAY WATERSHEDS (4)		21E4 22E3	Hogg Pass Marion Forks	24 13S 7/4E 4755 28 11S 7E 2730	22G15 22G5	Hyatt Prairle Reservolr Lake of the Woods Park Headquarters	15 39S 3E 4900 11 37S 5E 4960
172	Blue Mtn Pass (Nev) 25 45N 39E 6700		0.2(Ida) 10 8S 5W 6340 (Nev) 32 41N 58E 7800	BURNT, PC RONDE	WDER, PINE, GRANDE MNAHA WATERSHEDS 121		Grande Rande Riv			Upper John Day River		21E5 21E3	Mill City Santlam Junction Whitewater Bridge	29 9S 3E 826 14 13S 7E 3990	22G25 30G6MP	Pellcan Guard Station Quartz Mountain	8 31S 6E 6450 9 36S 6E 4150
्रिक्स च्य	Buckskin, upper (Ida) 29 12S 5W 5500	16F6s Succor Creek 15H9MP Taylor Canyon	(Ida) 25 3S 5W 6100 (Nev) 35 39N 53E 6200		urnt River	17D1	Ameroid Lake No. 1	16 4S 45E 7480	19D2P 18D12MP	Arbuckle Mountain 33 48 Battle Mountain Summit 29 38	29E 5400 31E 4340		McKenzie Rive	28 10S 7E 2175	22G10P 22G11	Seven Lakes No. 1 Seven Lakes No. 2	2 38S 16E 5320 3 34S 5E 6800 26 33S 5E 6200
16315s 1636s	Oliganter Peak (Nev.) 8 47N 34E 6500 Disaster Peak (Nev.) 2 45N 52E 7000	16H7a Toe Jam 15H8 Tremewan Ranch	(Nev) 29 40N 50E 7700 (Nev) 9 39N 55E 5700	18E14 Barney Cree	16 14S 36E 5950	17D2P 18E1P	Aneroid Lake No. 2 Anthony Lake	16 4S 45E 7300 18 7S 37E 7125	19E2M 18E16MP 18E13M	Blue Mountain Springs 21 15S		21E8	Dead Horse Grade	13 16S 7E 3800	20H1a 20G9AP 20G2AP	Strawberry	21 48N 11E 5750 4 40S 16E 5760
SELES SELECTES	ran Creek 4 33S 33E 7900	16G4MA Triangle 18G5a Trout Creek 18G7a "V" Lake	(Ida) 25 7S 3W 5150 10 41S 38E 7800	17EIMP Oooley Mounta	12 115 40E 3430	17D10a 18D9 18D8P	Deaver Keservair	8 15 4S 41E 6700 8 5S 37E 5340	19E3MP 18E27a	Derr 14 13S	36E 5098 23E 5670 32E 5700	22E4 21E7	Lost Creek Ranch McKenzle	24 16S 6E 1956 35 1SS 7½E 4800	21G2 20G13a	Summer Rim Sun Mountain Sycan Flat	15 33S 16E 7200 22 32S 74E 5350
1575	Folly Farm Summit (Nev) 33 46N 58E 6800 Fox Creek (Nev) 31 43N 54E 6700 Fox Canyon 31 45N 56E 6600	18G7a "V" Lake 16G12a Vaught Ranch 16G13a War Eagle	31 35'8 32'E 6600 (Ida) 10 11S 1W 5950 (Ida) 20 5S 3W 7700	18E8 Gold Center 18E9P Tipton	20 14S 38E 4600 21 9S 36E 5340 34 10S 35 ¹ ,E 5100	18D6P 18D5	County Line Lucky Strike Meacham 24	28 4S 34E 4800 28 3S 32E 5050	18E8 18E24a	Gold Center 21 9S	36E 5340 33E 6550	22E5 22E6 21E9	McKenzle Bridge Vida	13 16S 5E 1372 28 16S 2E 800	2 1G3P	Taylor Butte	25 31S 14L 5500 22 33S 11E 5100
1547 1545	Scli Creek (Nev) 22 44N 39E 7800	Malheu			wder River	17D13a 17D6M	Mirror Lake Moss Spring	8 25 1S 35E 4300 34 4S 44E 8200 28 3S 41E 5850	19E9P 18D6P	Izee Summit 28 165 Lucky Strike 28 3S	29E 5293 32E 5050	5.103	White Branch Slide	15 16S 7E 2800	Pacific	Pawer and Light Comp	ony's Snow Stations
16359	Hyde Pasture Tick Creek, Lower (Nev) 18 42N 53E 6800	18E14 Barney Creek	16 14S 36E 5950	18E1P Anthony Lak	18 7S 37E 7125	18D7 17Dlla	Schoolmarm Standley	28 4S 34E 4775 28 2S 42E 7400	20E1MP 20E2	Ochoco Meadows 21 13S	19E 4540 20E 5200		Middle Fark Willomett	e River	1	Beatty (PP&L)	22 36S 12E 4300
1654 1655	Jack Yeek, Upper (Nev) 28 42N 53E 8420 Jack Peak 2 30S 46E 4390	18E16MP Blue Mountain Spi 18F6a Buck Pasture		18E33 Anthony Ski 18E5 Bourne 17E1MP Doclar Man	33 8S 37E 5800	17D7P 18D3M	Taylor Green Tollgate	3 6S 42E 5740 32 4N 38E 5070	18E7 18D7 19F1M	Schoolmarm 28 4S	33',E 6000 34E 4775	22F3	Cascade Summit	7 23S 6E 4880	3 4	Bly 101 Ranch (PP&L) Chiloquin (PP&L) Crystal (PP&L)	22 3SS 14E 4800 34 34S 7E 4187 26 34S 6E 4200
1655	Jordan Valley Leurel Draw Lookout Butte Jordan Valley (Nev) 20 45N 53E 6700 24OS 47E 5650 Lookout Butte 27 40S 44E 6440	18E21a Bully Creek 18F7a Call Meadows	10 17S 37E 5300 29 20S 33E 5340	18E3 Eilertson M	18 8S 38E 5400	17D16a		12 2S 43E 7000	19E7M 18E9P	Starr Ridge 20 15S	26E 6300 31E 5150 35!;E 5100	22F6 22F8 22F7	McCredie Springs Meridian Dam Oakridge	36 21S 4E 2120 13 19S 1W 750	5 8	Fort Klamath (PP&L) Harrlman Lodge (PP&L)	22 33S 7½E 4150 3 36S 6E 4200
1736a 1734a	Louse Canyon Av 15 240 ADF 6700	17F2a Cottonwood-India: 18E19M Crane Prairie 18F8a Craw Camp	24 16S 34E 5375	18E6A Goodrich Lal 18E29 Intake House	4 9S 38E 6775	1701	Imnaha River Aneroid Lake No. 1			Williams Ranch 20 1SS		22F5 22F4	Railroad Overpass Salt Creek Falls	16 21S 3E 1310 21 22S 5E 2750	6 9	Kirk (PP&L) Quartz Mountain (PP&L)	1 33S 7E 4533 33 37S 16E 5504
1785 15890a	Martin Creek (Nev) 10 45N 54E 7000 Merritt Mountain (Nev) 10 46N 54E 7000	101.00 C.144 OFFID	26 23S 34E 5500	17D12m Ladd Summit	5 SS 39E 3730	17D2P 17D14a	Ameroid Lake No. 2 Big Sheep	16 4S 45E 7480 16 4S 45E 7300 33 4S 46E 6200		UPPER DESCHUTES, CROOKED WATERSHED)\$ 15)	22F2P 22F14*	Waldo Lake Willamette Pass	32 22S 5½E 4000 15 21S 6E 5500 33 24S 5½E 5600	12	Yamsey (PP&L)	20 31S 11E 4600
	123*	122*	N* mo*				UMATILLA, WALLA WALLA, WI		21E11	Upper Deschutes River			Caast Fark Willamette			AKE COUNTY, GOOSE LAKE	
C	1 W	A S H	I N G	T O N	117*		LOWER JOHN DAY WATER	SHEDS 131	21F8 22F3	Caldwell Ranch 30 21S	9E 4600 8E 4400 6E 4880	22F9 22F10	Champion Golden Curry Creek	12 23S 1E 4500	20G15a	Gaose Lake Bear Flat Meadow	27 36S 19E 5900
	CLATSOP			,		19D2P	Umatilla River Arbuckle Mountain	33 4S 29E 5400	21F11 21F20P	Chemult 21 27S Deer Creek 25 20S	BE 4760	22F13 22F12	Laying Creek R. S. Lund Park	1 23S 1E 3136 31 21S 1E 1200 22 22S 1E 1740	20G8MP 20G11A	Camas Creek Cox Flat	5 39S 21E 5720 16 37S 18E 5750
16-	Collin			To the state of th	DI3 • RIVE	18D14m 18D12MP	Athena-Weston Summit Battle Mountain Summit	21 4N 35E 1700	21F14 21E6	Fire Road 36 21S Hogg Pass 24 13S	11E 5050	22F11	Weaver Creek	35 22S 1E 2440	20G16a 20H2a 20H3a	Crane Mountain Crowder Flat (Cal) Dlsmal Swamp (Cal)	13 40S 21E 6020 30 47N 11E 5200
	No.	COLUMBIA	- OWER (3)	180	7 1803	18D4M 18D6P	Emigrant Springs Lucky Strike	29 1N 35E 3925 28 3S 32E 5050	21F4 21F6* 21F17	Hungry Flat 30 18S Irish-Taylor 25 20S	6E 5500	0053	Mary's River		20G17a 20G6MP	Patton Meadow Quartz Mountain	31 48N 16E 7200 28 38S 18E 6800 2 38S 16E 5320
	PORTLA	AND ZIDI Q	a Ilmatill	la, Walla Walla	SOID S WAL LOW A	18D5 18D3M	Tollgate	8 25 1S 35E 4300 32 4N 38E 5070	21F10 21F19P	Mowich 29 2SS New Crescent Lake 11 24S New Dutchman Flat #2 21 18S	6E 4800	23E1	Mary's Peak ROGUE, UMPQUA WATER	21 12S 7W 3620	20Hla 20G9AP		21 48N 11E 5750 4 40S 16E 5760
[D	WASHINGTON MUL	THOMAH HOOO ZIDSE CO.		low, Rock	17016	18D13	Walla Walla Diversion Walla Walla Rive		21F13P 21F15	Paulina Lake 34 21S : Paulina Prairie 28 21S :	12E 6330		Rague River	COHEDO 181		Aberi Loke	
	TILLA WOOM	Song R 21024 Supermile 210 2 2005 mile 210 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		ver John Day	1701de 17011	18D16	Elue Mountain Camp	35 4N 37E 4300	21F3 21E15	Tangent 28 18S : Three Creeks Butte 27 16S	10E 5400 9E 5200	23G4P	Althouse	17 41S 7W 4530	20G15a 20G18ap	Bear Flat Meadow Colvin Creek	27 36S 19E 5900 12 36S 21E 6550
11	TAMHILL	ACKAMA SZIDS Hood,	SHERMAN GILLIAM	(806) (808) (808) (808)	Burnt, Powder, Pine,	18D3M 18D17	Tollgate Weston Mountain	32 4N 38E 5070 25 4N 35E 2700	21E13 22F2P 22F14*	Three Creeks Meadows 34 16S Waldo Lake 15 21S Willamette Pass 33 24S	6E 5500	22G6 22G28 22G21P	Annie Spring Beaver Dam Creek	19 31S 6E 6018 1 38S 4E 5100	20G11A 20G14a	Cox Flat Finley Corrals	16 37S 18E 5750 11 36S 16E 6000
		21013 Lower Deschi	7 1 1 -3	1902	Grande Ronde, Imnaha				22F15	Willamette Pass 33 24S Windigo Pass 32 25S		22G13P 22G30	Billie Creek Dlvlde	31 40S 1W 6500 30 36S SE 5300 16 40S 1E 6500	20G4 20G6MP	Mill Creek Quartz Mountain	1 34S 17E 6200 2 38S 16E 5320
15-	Willamette			IUES	18E239 18E28	1902	LEGEND SNOW COURSE DNLY	į	i	Crooked River		22G27 22F19	Deadwood Junction	8 38S 4E 4600 34 28S 6E 5800	20G10a	Sherman Valley Summer Lake	15 37S 21E 6600
	M A R 22E	22E2 22El 31E	TY .	IBER.	18E5 • SE6	1902M	SNOW COURSE AND SOIL MOISTURE A SNOW COURSE, SOIL MOISTURE AN	ID AERIAL MARKER	19E3MP 20E1MP	Derr 14 13S 2 Marks Creek 25 12S 1	19E 4540	22G14P 22G12	Fish Lake Fourmlle Lake	3 37S 4E 4865 9 36S 5E 6000	20G2AP	Summer Rim	15 33S 16E 7200
		RIVER	WHEELER	1952	17EI PINET	1902A 1902m ====================================		ER	20E2 19F1M 19E4	Ochoco Meadows 21 13S 2 Snow Mountain 1 19S 2 Tamarack 8 1SS 2	26E 6300	23G3 22G26 22G16		9 40S 5W 6000 32 38S 4E 4500		Silver Lake	
E	LINCOLN	2165	2081	Upper John Day IBETS	Burni R S	1902P	SNOW COURSE AND PRECIPITATION PRECIPITATION GAGE ONLY RADID TELEMETRY	ON GAGE		Tamarack 8 1SS 2 , MILE CREEKS, LOWER DESCHUTES WATER:		22G22 22G31	Little Red Mountain	15 39S 3E 4900 25 40S 2W 6500 15 40S 1E 6400			26 29S 13E 4900
	Signal Air	ver Ser	€0EZ	G R A N T IBE24	Willow -		THOSE FEEDING THE		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Haad River	311203	23G5 22G5	Page Mountain Park Headquarters	8 41S 7W 4045 8 31S 6E 6450	\$00130	Sycan Flat Warner Loke	25 31S 14E 5500
	1000	RIVER JOER ZIEIS	See	19E9 (18E27) 18E18 18E19	018E32		1		21D6P	Brooks Meadows 2 2S 1		22G10P 22G11 22G2		3 34S 5E 6800 26 33S 5E 6200		Camas Creek	5 39S 21E 5720
- u-	Mc to SZE	21F19 21F4	CROOK	IgFI	18.2			44"	21D25M 21D1 21D20	Cooper Spur 6 2S 1 Greenpoint Reservoir 28 2N Vechal Springs 21 1S 1	9E 3400	22G20 22G32	Slskiyou Summit	30 30S 4E 3720 17 40S 2E 4630 22 40S 1E 6000	20G16a 20H3a 19G1a	Crane Mountain Dismal Swamp (Cal)	13 40S 21E 6020 31 48N 16E 7200
	L AN EZZEB	Upper Deschute	es Crooked -	1951	•I7F2		Malaut d Court		21D23 21D8*	Knebal Springs 31 1S 1 Parkdale 5 1S 1 Phlox Point 7 3S	OE 1770	22G9 22G1	South Fork Canal	12 33S 3E 3500 3 31S 2E 5140		Hart Mountain Sherman Valley	1 36S 25E 6350 15 37S 21E 6600
	33	22F7 22F2 2IF20 2IF15		18F3 (S) 18F4	Moinous		Walershed Bour	ngary	21D4 21D9	Red Hill 20 1S Still Creek 25 3S	9E 4400		Umpqua River			Guano Lake	
-	(§ 22F12 22F11) 22F9 22F10	22F4 21F13		•19F(F,			Sub-wotershed	Boundary	21D28 21D7P	Switchback 28 1S Tilly Jane 15 2S	9E 3255 9E 6000	22F9 22F18P	Champion Diamond Lake	12 23S 1E 4500 29 27S 6E 5315		Bald Mountain (Nev) Hart Mountain	1 36S 25E 6350
F		22F14 21F10		The state of the s	984		 Snow Course 		21D21 21D30	Ulrich Ranch Junction 28 1S 1: Umbrella Falls 3 3S	9E 5400	23G8 23G9	King Mountain No. 1	5 33S 4W 4500 4 33S 4W 4000	19H4a	Little Bally Mt. (Nev) HARNEY BASIN WATERS	
Q	North Cangara River	22FIS 21F17	Lake County,	Molheur Loke	MALHEUR	25		01-11	2 1D24	Upper Valley 20 1S 10 Mile Creeks - Masier Creek	OE 253U	23G10 23G11	King Mountain No. 3	33 32S 4W 3648 33 32S 4W 3049		Silvies River - Silve	
	00 5 00 5 22F28 22E27	22FI7 • 21FII	Goose Lake	Horney Loke	Owyhee, Malheur		O PP&L Snow	Stotion 43°	21D6P	Brooks Meadows 2 2S 10	OE 4300	23G12 23G13		20 32S 4W 1820	18F7a 19F2	Delintment Lake	29 20S 33E 5340 28 19S 26E 5600
05-2	22F24 22F25	21F18 21F12	O Silver Loke	1868	01863 1763	IEGI3			21D20 21D21	Knebal Springs 31 1S 11 Wlrich Ranch Junction 28 1S 11	1E 3850	22F16 22F23 22F24	Red Butte No. 1	19 26S 6E 4215 86 27S 2W 4560 10 27S 1W 4000	18F3P	Idlewild Camp	14 21S 27E 5000 27 20S 31E 5200 28 16S 29E 5293
	Rogue Umpaus 2268	2262 Groter L 200	20GI3 L A K E	HARNE (Y		1505				Lawer Deschutes River		22F25 22F26	Red Butte No. 3 3 Red Butte No. 4 3	0 27S 1W 3500 0 27S 1W 3000	18F1 19F1M	Rock Spring Snow Mountain	23 18S 32E 5100 1 19S 26E 6300
	2505k \$230k page 1944	261 2162 S	Loke Loke	3 018 G2	1661 660	0 W Y H E E			21D12 21D22	Clear Lake 29 45 9 Clear Lake Experlmental 29 45 9	9E 3500	22F27 22F28 22F17	Red Butte No. 6	7 27S 1W 2500 7 27S 1W 2000 1 27S 4E 3800	18F4MP	Stinking Water :	20 15S 31E 5150 13 21S 34E 4800 .9 22S 29E 5000
G	CURAT	2200 LAMAT M 2061	2. Loke Abert	>2		(legiz			21E6	Hogg Pass 24 13S 7		22G1	Whaleback	3 31S 2E 5140 2 25S 6E 5800	K 21 210	Donner Und Blitzen F	
	JOSEPHINE FROM	2GI 80 10 10 10 10 10 10 10 10 10 10 10 10 10	20G1 20G18 20G18 WAY	Harney Basin 1867 Of Love	17G6 0 16G10	lecg				LOWER COLUMBIA WATERSHEDS (7) Sandy River			KLAMATH WATERSHEDS			Buck Pasture 2	1 29S 35E 5700 4 33S 32½E 7900
	22027	22G15 Vignor 21G5 22G28 Klamath 21G.	9 20GII (20GIO)	Trout	17G2	4			21D8*	Phlox Point 7 3S 9			Klamoth Rivar		19G1a F	Hart Mountain Hilvies 3	1 36S 25E 6350 5 32S 32\E 6900
49	2363 22632 2263	12G 16 (05) QVB' 21G	2068 2068 GG	uono Creek	G5 18HI	Alve	e 15 H2 O	42°	21D9	Still Creek 25 3S 8 WILLAMETTE WATERSHEDS (6)	ME 3670	22G6 22G13P	Billie Creek Dlvlde 30	9 31S 6E 6018 0 36S 5E 5300	18G7a '	V" Lake 3	1 354S 324E 6600
	2364 3-33 22921 22920	10var	Goose 20HI I gan 20H3		U N B O L O T	IEHB IEH	15H2 15H1			Clackamas River		21G5M 21F11 22G24*	Chemult 21	2 37S 11E 5090 1 27S 8E 4760 2 35S 5E 6100	18G6a 0	Trout and Whiteharse enlo Creek	41S 34E 6000
	SISKI	Y O U Klamath L M	20HI Lake 20H3	H O E	E V 17H1 A D	Tary E	к о 15Н3		21D3	Clackamas Lake 35 SS 8	%E 3400	20G12a 20H2a	Crezyman Flat (Cal) 30	34S 15E 6100 0 47N 11E 5200	18H1 D 17G5a O	isaster Peak (Nev) 8 regon Canyon 9	47N 34E 6500 40S 40E 6950
		O R IN I	VA	·	17H4 17H3	16	H6 15H6 15H7		21D12 21D14P*	Peavlne Rldge 14 & 15 6S 71	E 3500	22F19 21F18	Dlamond-Crater Summit 34 Diamond Lake Jct. (97)			rout Creek 10	1 41S 38E 7800
Н	20 D 20	40 60				16H7	16H1 16H4		21D8* 21D9	Phlox Point 7 3S 9I Still Creek 25 3S 8I		21G6a 20G14a		36S 16E 6000	18G8a B	Horney Loke uckskin Lake 2	30S 30E 5200
	SCALE IN	MILES				16Н3	• 5H8 15H9										
1	124' 123°	122°	120°	119*	118°	100	116' 115'	- 10		3.4	1 T	d	to OREGO	N SNOW	COL	IRSES	
	23 22	21	20	19 18		16	l)	14_		мар а	and In	aex	to Okego	IA DIAO M		7110110	

The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

Idaho Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon State University
Oregon State Engineer and Corps of State Watermasters
Oregon State Highway Engineers

Soil and Water Conservation Districts of Oregon

COUNTY

Douglas County Water Resources Survey FEDERAL

Department of Agriculture
Cooperative Extension Service
Forest Service
Soil Conservation Service
Department of Commerce

Weather Bureau

Department of the Interior
Bonneville Power Administration
Bureau of Land Management
Bureau of Reclamation
Fish and Wildlife Service
Geological Survey
National Park Service

Department of National Defense Corps of Army Engineers

PUBLIC UTILITIES

Pacific Power and Light Company Portland General Electric Company California-Pacific Utilities Company

MUNICIPALITIES

City of Baker City of La Grande City of The Dalles City of Walla Walla

IRRIGATION DISTRICTS

Arnold Irrigation District Associated Ditch Companies Burnt River Irrigation District Central Oregon Irrigation. District East Fork Irrigation District Grants Pass Irrigation District Hood River Irrigation District Jordan Valley Irrigation District Juniper Flat Irrigation District Lakeview Water Users, Incorporated Medford Irrigation District Middle Fork Irrigation District North Board of Control - Owyhee Project North Unit Irrigation District Ochoco Irrigation District Rogue River Valley Irrigation District South Board of Control - Owyhee Project Squaw Creek Irrigation District Talent Irrigation District Tumalo Project Vale-Oregon Irrigation District

Warmsprings Irrigation District
PRIVATE ORGANIZATIONS

Amalgamated Sugar Company
The Crag Rats, Hood River, Oregon

UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE 1218 S.W. WASHINGTON ST. PORTLAND, OREGON 97205

OFFICIAL BUSINESS

POSTAGE AND FEES PAID U. S. DEPARTMENT OF AGRICULTURE

FEDERAL - STATE - PRIVATE

COOPERATIVE SNOW SURVEYS

Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"The Conservation of Water begins with the Snow Survey"